



**COMMUNITY DEVELOPMENT DEPARTMENT**  
825 IMPERIAL BEACH BOULEVARD • IMPERIAL BEACH, CALIFORNIA 91932

October 19, 2006

**NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION**

**RE: ED JOHNSON DUPLEX (MF 701)**

**NOTICE IS HEREBY GIVEN**, pursuant to Section 15072 of Title 14, Chapter 3 of the California Code of Regulations (CEQA Guidelines), that the City of Imperial Beach is proposing to adopt a Mitigated Negative Declaration (MND) in accordance with the California Environmental Quality Act (CEQA) for the project described below.

**PUBLIC REVIEW:** The proposed MND may be reviewed from **October 19, 2006 to November 20, 2006** at the Imperial Beach **City Clerk's** office at 825 Imperial Beach Boulevard, at the Imperial Beach **Community Development Department** at 825 Imperial Beach Boulevard, and at the Imperial Beach **Public Library** at 810 Imperial Beach Boulevard. The document will also be posted on the City's website at [www.cityofib.com](http://www.cityofib.com) under Notices. Written comments on the proposed MND must be received by the Imperial Beach Community Development Department at 825 Imperial Beach Boulevard no later than 5:00 pm on **November 20, 2006**. If you challenge the City's action on this environmental document in court, you may be limited to raising only those issues that you or someone else raised in written correspondence delivered to the City.

**ANTICIPATED CITY COUNCIL PUBLIC HEARING DATE:** **February 1, 2007** at 6:00 pm in the Council Chambers, 825 Imperial Beach Blvd., Imperial Beach, CA.

**PROJECT DESCRIPTION, APPLICANT AND LOCATION:** An application by Ed Johnson represented by Tim Monahan of NewTrac Pacific for Regular Coastal Development Permit (CP 04-58)/Design Review (DRC 04-59)/Site Plan Review (SPR 04-60)/Environmental Impact Assessment (EIA 04-61) and Variance (VAR 05-313) to construct two attached residential units, 30 feet high, with a vertical seawall and requesting a front yard setback reduction from 20 feet to 6 feet on a vacant 5,724 square foot lot at 684-686 Ocean Lane. The property (APN 625-011-16-00) is designated R-1500 (High Density Residential Zone) by the General Plan/Local Coastal Plan

The project is located in the Appeal Jurisdiction of the California Coastal Commission as indicated on the Local Coastal Program Post Certification and Appeal Jurisdiction Map and, as such, is appealable to the California Coastal Commission under Section 30603(a) of the California Public Resources Code.

**CONTACT PERSON:** **Jim Nakagawa**, Imperial Beach City Planner, at 619-628-1355 or at [jnakagawa@cityofib.org](mailto:jnakagawa@cityofib.org).

## Attachments:

1. Draft Mitigated Negative Declaration

## c: file MF 701

Tim Monahan, Vice President, NewTrac Pacific, Inc., 4918 N. Harbor Drive, Suite 101,  
San Diego, CA 92106

Edwin H Johnson, 3950 N. Rio Verde Vista Drive, Tucson, AZ 85750

John Coffey, Tri-Dimensional Engineering, Inc., P.O. Box 791, Poway, CA 92074

Dave Skelly, GeoSoils Inc., 5741 Palmer Way, Suite D, Carlsbad, CA 92008

Nick Larkins, Assistant Project Manager, P&D Environmental Consultants, Rio San  
Diego Plaza, 8954 Rio San Diego Drive, Suite 610, San Diego, CA 92108

Gary Brown, City Manager

Robert Stabenow, Lifeguard Captain

Greg Wade, Community Development Director

Hank Levien, Public Works Director

Ed Wilczak, Building Official

Jacque Hald, City Clerk

Jim Lough, City Attorney

City Engineer, Gordon Axelson, BDS Engineering Inc., 6859 Federal Blvd, Lemon  
Grove, CA 919145

Darlene Nicandro, San Diego Unified Port District, P.O. Box 120488, 3165 Pacific  
Highway, San Diego, CA 92112-0488

Jonni O'Neal, 1157 Fifth Street, Imperial Beach, CA 91932

Nancy Schmidt, P.O. Box 52, La Mesa, CA 91944

Mike Lavera, PO Box 1826, La Jolla, CA 92038

Winkelman Revocable Trust 05-1, 30 Palm Avenue, Imperial Beach, CA 91932

Diana Lilly, Coastal Program Analyst, California Coastal Commission, 7575 Metropolitan  
Drive, Suite 103, San Diego, CA 92108-1735

Terry Roberts, State Clearinghouse (15 copies), Office of Planning and Research, P.O.  
Box 3044, 1400 Tenth Street, Room 222, Sacramento, CA 95812-3044

San Diego County Recorder/Clerk; ATTN: Anthony Consul, 1600 Pacific Highway, Rm.  
260, P.O. Box 1750, San Diego CA 92112-1750



**DRAFT**

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FAX: (619) 429-9770

**COMMUNITY DEVELOPMENT DEPARTMENT**

825 IMPERIAL BEACH BOULEVARD • IMPERIAL BEACH, CALIFORNIA 91932

**MITIGATED NEGATIVE DECLARATION**

**OCTOBER 19, 2006**

**A. PROJECT NAME/PROJECT DESCRIPTION/APPLICANT/PROJECT LOCATION:**

**Ed Johnson Duplex:** An application by Ed Johnson represented by Tim Monahan of NewTrac Pacific for Regular Coastal Development Permit (CP 04-58)/Design Review (DRC 04-59)/Site Plan Review (SPR 04-60)/Environmental Impact Assessment (EIA 04-61) and Variance (VAR 05-313) to construct two attached residential units, 30 feet high, with a vertical seawall and requesting a front yard setback reduction from 20 feet to 6 feet on a vacant 5,724 square foot lot at 684-686 Ocean Lane. The property (APN 625-011-16-00) is designated R-1500 (High Density Residential Zone) by the General Plan/Local Coastal Plan.

The project is located in the Appeal Jurisdiction of the California Coastal Commission as indicated on the Local Coastal Program Post Certification and Appeal Jurisdiction Map and, as such, is appealable to the California Coastal Commission under Section 30603(a) of the California Public Resources Code.

**B. ENVIRONMENTAL FINDINGS:**

**Find:** that this Mitigated Negative Declaration reflects the decision-making body's independent judgment and analysis; that the decision-making body has, pursuant to CEQA Guidelines Section 15074(b), reviewed and considered the information contained in this Mitigated Negative Declaration and the comments received during the public review period; that revisions in the project plans or proposals made by or agreed to by the project applicant, pursuant to CEQA Guidelines Section 15070(b)(1), would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and that, on the basis of the whole record before the decision-making body (including this Mitigated Negative Declaration) there is no substantial evidence that the project as proposed, as conditioned, or as revised, will have a significant effect on the environment.

This Mitigated Negative Declaration (MND) is comprised of this document along with the Environmental Initial Study, which, pursuant to CEQA Guidelines Section 15063(f) may consist of the Environmental Information Form and the Environmental Checklist Form (Appendix G). This MND considered the potential cumulative impacts of the project, the Palm and Carnation Avenue Street End Enhancement Project, and any other past, present and reasonably foreseeable future projects, and it incorporates, pursuant to CEQA Guidelines Section 15150, the Revised Final Environmental Impact Report (SCH#2002031106) for the Palm and Carnation Avenue Street End Enhancement Project.

This document is considered a draft until it is adopted by the appropriate City of Imperial Beach decision-making body as lead agency.

**C. MITIGATION MEASURES:****Air Quality:**

Temporary impacts to air quality associated with construction activities are anticipated. Implementation of the following measures during construction operations will reduce impacts to below a level of significance:

1. Water all active construction areas at least twice daily.
2. Cover all trucks hauling soil, sand, and other loose materials, or require trucks to maintain at least 2 feet of free board.
3. Pave/apply water three times daily, or apply nontoxic soil stabilizers, on all unpaved access roads, parking areas, and staging areas at the construction sites.
4. Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction site.
5. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
6. Hydroseed or apply nontoxic soil stabilizers to inactive construction areas. Inactive construction areas are areas that have been previously graded and are inactive for 10 days or more.
7. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
8. Replant vegetation in disturbed areas as quickly as possible.
9. Suspend excavation and grading activity when wind gusts exceed 25 MPH.

**Biological Resources:**

The following measures shall be implemented to reduce potential impacts to the pismo clam and grunion associated with construction activities:

10. Impacts to pismo clam shall be mitigated by avoiding vehicle use in the lower intertidal zone and minimizing vehicle use in the middle intertidal zone (or conduct a survey at the time of construction to verify their absence); and
11. Impacts to grunion shall be mitigated by scheduling construction in the potential spawning locations outside the spawning period (e.g., September 1 to March 1). Alternatively, significant impacts due to construction may be avoided during the spawning period by implementing a monitoring and avoidance protocol within the construction zone by a qualified biologist, who shall establish an appropriate buffer around any observed spawning locations to restrict vehicles and equipment for a period of 14 days to allow grunion eggs to hatch.

**Geology and Soils:**

The following geotechnical mitigation measures shall be required in the planning and implementation of the project:

12. A comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory test, shall be conducted prior to design and construction if prior studies need to be updated. The purpose of the subsurface evaluation would be to further evaluate the subsurface conditions in the area of the proposed structures and to provide information pertaining to the engineering characteristics of earth materials at the project site. From the data, recommendations for grading/earthwork, surface and subsurface drainage, foundations, pavement structure sections, and other pertinent geotechnical design considerations may be formulated.
13. Vibration induced settlement due to driving of sheet piles may occur during the construction of the seawalls. Nearby structures and pavement may experience distress due to the induced settlements. A vibration monitoring plan shall be implemented during construction of the sheet pile seawalls. The purpose of the plan would be to document construction induced vibrations.
14. A baseline geotechnical reconnaissance shall be performed at each of the nearby structures to document pre-construction distress features, if any. Such an evaluation may include manometer surveys, crack measurements, and photographic/video documentation.
15. During construction, nearby structures shall be monitored for distress and/or settlement that may occur as a result of construction. Upon completion, a final evaluation of the nearby structures shall be performed, and the results compared with the initial baseline findings.
16. Liquefiable soils may be present on the site. The confirmation of their presence (or absence) shall be done through subsurface exploration (e.g., drilling) and laboratory testing.
17. Loose surficial soils that are not suitable for structural support in their current state are present on the sites. The loose surficial soils shall be mitigated by their removal during site grading. Much of the soils should be suitable for reuse as compacted fill.
18. The project has a potential for strong ground motions due to earthquakes. Accordingly, the potential for relatively strong seismic accelerations will need to be considered in the design of proposed improvements.

#### **Hydrology and Water Quality:**

The potential for impacts to water quality would primarily occur as a result of construction activities. The following measures will need to be implemented prior to initiation of construction activities:

19. Prior to City approval, the grading and drainage plans will be reviewed for compliance.
20. The proposed project includes an enclosed parking garage; therefore, excavation below the street level elevation may intercept the groundwater table. A geotechnical report will be required prior to construction to ensure the appropriate measures are implemented. Temporary construction dewatering may be required during excavation. The applicant will be responsible for obtaining an appropriate permit for construction dewatering.

21. Project shall adhere to the Water Pollution Control Plan (WPCP) prepared by Tri-Dimensional Engineering as conditioned and approved by the City of Imperial Beach including Construction and Permanent Best Management Practices (BMP) and other requirements pursuant to the City's Standard Urban Storm Water Mitigation Plan (SUSMP).

In order to provide the appropriate protection to the project site in case of a flood event, the applicant will be required to meet the following measures:

22. Implementation of Flood Hazard Reduction Standards established for construction in order to assure protection from flooding (Imperial Beach Municipal Code 15.50.160).
23. In addition to building permits, a flood hazard area development permit shall be obtained from the City Engineer prior to commencement of any construction (Imperial Beach Municipal Code 19.32.020).

**Noise:**

The following mitigation measures must be implemented to reduce impacts to below a level of significance:

24. The applicant will be responsible for notifying residents and businesses within a 500-foot radius prior to shoring activities.
25. Construction activities associated with implementation of sheet pile design will be limited to the hours of 8 a.m. to 5 p.m., Monday through Friday.
26. The applicant will notify all residents within 500 feet of the project site prior to pile driving activities. The applicant will also incorporate the best available technology acoustical dampering features during pile driving or drilling.

**D. ADOPTION:**

This Mitigated Negative Declaration (SCH#2006\*\*\*\*\*) was adopted and the aforementioned CEQA findings were made by the Imperial Beach City Council on \_\_\_\_\_.

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James Nakagawa, AICP  
Imperial Beach City Planner

**Attachments:**

1. Environmental Information Form
2. Environmental Checklist Form (Appendix G)
3. Water Pollution Control Plan
4. Coastal Engineering/Seawall Study



## ENVIRONMENTAL INFORMATION FORM

(To be completed by Applicant)

If the project cannot be initially be determined to be exempted from CEQA, then a \$1,000 deposit may be required to analyze the environmental information. If it is determined that a Negative Declaration needs to be prepared, an additional \$2,000 deposit will be required, and if an Environmental Impact Report (EIR) needs to be prepared, the applicant will be required to submit a draft EIR, prepared by a qualified environmental consultant, and an additional \$7,000 deposit for its review.

Project Address: 684/686 Ocean Lane Imperial Beach, CA 91932	Assessor's Parcel #: 625-011-16-00
Applicant: Edwin Johnson and Rose Gravinor	Owner: Edwin Johnson and Rose Gravinor
Related Permit/Case: N/A	Zoning/General Plan Designation: R-1500 Residential High Density/R-1500 Residential
<p>Project Description: The project site is an undeveloped beachfront parcel located on Ocean Lane, within the City of Imperial Beach. The proposed project is the development of 2 residential units on approximately 0.2 acre. The building will be a 3-story building with a maximum height of 30 feet. The project is to include two separate garages for each residential unit with 2 parking spaces per garage. Open space and landscaping are proposed to cover approximately 1,213.52 square feet, which includes beach areas and landscaping. A concrete seawall with tempered glass cap is proposed along the western and northwestern perimeter of the structure and will be approximately 8.5 feet in height (from the elevation of the sand level) along the western perimeter and 3.5 feet in height along the northwestern perimeter. Please see attached for site plan.</p> <p>Plans attached: <input checked="" type="checkbox"/></p>	
Proposed use: <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Institutional (school, church, etc.)	
# off-street parking spaces <input checked="" type="checkbox"/> # enclosed <u>  4  </u> <input type="checkbox"/> # open <u>          </u>	
# dwelling units: 2	Parcel size: 5,724 sq. feet
Building Height: 30 feet	# Stories: 3 stories
Total Floor Area: 1 du/2,862 sq. feet	Floor Area Ratio (FAR): 100%
Lot Coverage: 50%	Average Daily Auto Trips: 16
# Employees: N/A	Per Shift: N/A
Weekday hrs of operation: N/A	Weekend hrs of operation: N/A
Clients/Customers per day: N/A	Market/service area: N/A

<p><b>Environmental Setting/on-site:</b></p> <p>Describe the project site as it exists before the project, including existing uses and structures, building heights, topography, vegetation, cultural, historical or scenic aspects. Attach photographs.</p> <p>The project site is an undeveloped beachfront parcel that consists of predominantly beach sand underlain by the Baypoint Formation, with low height quarry stone revetment along the western boundary of the project site. The shifting sand slopes from approximately 7 feet mean sea level (MSL) up to 13.5 feet MSL at the midpoint of the site, then slopes back to 8.6 feet MSL at the property line adjacent to Ocean Lane. The project site is located between two off-shore protection groins, known as a groin compartment, located at Palm Avenue (south) and off the coast of the U.S. Naval Base to the north of City of Imperial Beach. The project site is located in an area that consists of medium and high density residential, single-family residential, and commercial.</p>	<p><b>Environmental Setting/off-site:</b></p> <p>Describe the surrounding properties, including land uses and structures, building heights, vegetation, cultural, historical or scenic aspects. Attach photographs of the vicinity.</p> <p>To the north of the project site is a 3-story two family residence with low height quarry stone revetment and a wave run-up deflection wall. Other single- and multi-family developments continue north along the beachfront with similar stone revetments. To the south of the site is a recently constructed four unit 30-foot high residential structure with underground parking and a sheet pile seawall. The development is a three-story structure that has a height of approximately 30 feet AMSL, with architectural features reaching a similar height as the proposed project. South of the four-unit development is Palm Avenue whose street end is proposed for enhancement by the Port District and the City of Imperial Beach. South of Palm Avenue is a 2-story multi-family residence over an enclosed parking. To the east of the proposed project is 3-story multi-family dwelling building. To the west is the Pacific Ocean.</p>
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**CHECKLIST:**

Are the following items applicable to the project or its effects? Discuss below all items checked yes (attach additional sheets as necessary).	Yes	No
Change in existing features of any bays, tidelands, beaches, or hills, or substantial alterations of ground contours.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Change in scenic views or vistas from existing residential areas or public lands or roads.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Change in pattern, scale or character of general area of project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Significant amounts of solid waste or litter.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Change in dust, ash, smoke, fumes or odors in vicinity.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Change in ocean, bay, lake, stream or ground water quality or quantity, or alteration of existing drainage patterns.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Substantial change in existing noise or vibration levels in the vicinity.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Site on filled land or on slope of 10 percent or more.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Use of disposal of potentially hazardous materials, such as toxic substances, flammables or explosives.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Substantial change in demand for municipal services (police, fire, water, sewage, etc).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Substantially increase fossil fuel consumption (electricity, oil, natural gas, etc).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Relationship to a larger project or series of projects.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Significant amounts of impervious surfaces.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Significant amounts of pollutant discharges.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Change in any on-site or off-site environmentally sensitive area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION OF POTENTIAL IMPACTS:**

See attached environmental checklist for detailed rationale.

**APPENDIX G****Environmental Checklist Form**

1.	Project title: 684/686 Ocean Lane		
2.	Lead agency name and address: City of Imperial Beach – Community Development 825 Imperial Beach Blvd., Imperial Beach, CA 91932		
3.	Contact person and phone number: James Nakagawa, City Planner (619) 628-1355		
4.	Project location: The project site is in the City of Imperial Beach (Figure 1) on Ocean Lane, north of Palm Avenue and west of Seacoast Drive (Figure 2). The project site consists of a single structure with two residential units located at the addresses of 684 and 686 Ocean Lane, Imperial Beach, CA 91932.		
5.	Project sponsor's name and address: Edwin Johnson and Rose Gravinor 3950 N. Rio Verde Vista Drive Tucson, AZ 85750		
6.	General plan designation: R-1500 (High Density Residential)	7.	Zoning: R-1500
8.	<p>Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)</p> <p>The project site is an undeveloped beachfront parcel located on Ocean Lane, within the City of Imperial Beach (See Figures 1 and 2). The proposed project is the development of 2 residential units on approximately 0.2 acre. The building will be a 3-story building with a maximum height of 30 feet. Measuring from the base of the elevator machine room, the building will have a height of 34' 2" (the floor of the elevator machine room is subgrade). The project is to include two separate garages for each residential unit with 2 parking spaces per garage. Open space and landscaping are proposed to cover approximately 1,213.52 square feet, which includes beach areas and landscaping. A concrete seawall with tempered glass cap is proposed along the western and northwestern perimeter of the structure and will be approximately 8.5 feet in height (from the elevation of the sand level) along the western perimeter and approximately 3.5 feet in height along the northwestern perimeter. Please see attached for site plan (Figures 3 and 4)</p>		

9.	<p>Surrounding land uses and setting: Briefly describe the project's surroundings:</p> <p>The project site consists of predominantly beach sand underlain by the Baypoint Formation, with low height quarry stone revetment along the western boundary of the project site. The shifting sand slopes from approximately 7 feet mean sea level (MSL) up to 13.5 feet MSL at the midpoint of the site, then slopes back to 8.6 feet MSL at the property line adjacent to Ocean Lane. The project site is located between two off-shore protection groins, known as a groin compartment, located at Palm Avenue (south) and off the coast of the U.S. Naval Base to the north of City of Imperial Beach.</p> <p>The project site is located in an area that consists of medium and high density residential, single-family residential, and commercial (See Figure 5). To the north of the project site is a 3-story two family residence with low height quarry stone revetment and a wave run-up deflection wall. Other single- and multi-family developments continue north along the beachfront with similar stone revetments. To the south of the site is a recently constructed four unit residential structure with underground parking and a sheet pile seawall. The development is a three-story structure that has a height of approximately 30 feet AMSL, with architectural features reaching a similar height as the proposed project. South of the four-unit development is Palm Avenue whose street end is proposed to be enhanced by the Port District and the City of Imperial Beach. South of Palm Avenue is a 2-story multi-family residence over an enclosed parking. To the east of the proposed project is a 3-story multi-family dwelling building. To the west is the Pacific Ocean.</p>
10.	<p>Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)</p> <p>None</p>

#### ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture Resources	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Geology /Soils
<input type="checkbox"/>	Hazards & Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology / Water Quality	<input type="checkbox"/>	Land Use / Planning
<input type="checkbox"/>	Mineral Resources	<input checked="" type="checkbox"/>	Noise	<input type="checkbox"/>	Population / Housing
<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation/Traffic
<input type="checkbox"/>	Utilities / Service Systems	<input type="checkbox"/>	Mandatory Findings of Significance		

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NOTICE OF EXEMPTION will be prepared.
<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ James Nakagawa, AICP, City Planner	Date _____
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#### EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where they are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
  - a) the significance criteria or threshold, if any, used to evaluate each question; and
  - b) the mitigation measure identified, if any, to reduce the impact to less than significance

**CHECKLIST QUESTIONS:**

Issues:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Could the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The project site is located along the Pacific coast line in the northern area of the City of Imperial Beach, which is designated as the Seacoast neighborhood. Scenic vistas are identified in the Design Element of the General Plan/Local Coastal Plan (GP/LCP) within the vicinity of the project site. The beachfront is identified as a scenic resource and the Palm Avenue corridor is designated by the zoning ordinance as a design corridor. The project site is located approximately 75 feet north of Palm Avenue and is separated from the roadway by an 8,848 square foot parcel that is currently developed as a four-unit building. The proposed project would not restrict public views of scenic resources from the Palm Avenue street-end or from the public beach from the north and south of the proposed project, and is in conformance with Coastal Act policies regarding protection of scenic views from public areas. Therefore, the proposed project would not create a substantial adverse effect on a scenic vista.</i>				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is located along the Pacific coast line and no scenic highways are in the immediate vicinity of the project site. Therefore, development of the proposed project will not result in any impacts to trees, rock outcroppings,</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>or historic buildings within a state scenic highway (characterized as scenic resources by CEQA).</i>				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The project site is located amongst existing single- and multi-family residential development. The site is currently undeveloped and the project proposes 3-story structure with two attached residential units. The proposed project consists of architectural elements that create variation in the height of the proposed structure. The roofline along the western portion of the proposed project would be lower than the roofline of the existing 3-story single-family residence to the north and the highest point of the proposed project would be similar to the height of the new 3-story multi-family project to the south. To the east of the project site, across the alley, is a 3-story multi-family development. Therefore, the proposed project would be consistent with the existing and approved residential development of the surrounding neighborhood. The potential for the proposed project to substantially degrade the existing visual character or quality of the site and its surroundings would be less than significant.</i>				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project will not incorporate any lighting, other than typical residential exterior lighting. Therefore, the proposed project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.</i>				
II. AGRICULTURE RESOURCES: In				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Could the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is designated as Urban and Built up Land according to the California Resources Agency Farmland Mapping and Monitoring Program (FMMP). Therefore, the proposed project would not result in the conversion of lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland).</i>				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The existing zoning designation is R-1500 (Residential). Because the site is not zoned for agricultural use or under a Williamson Act contract, the proposed project will not conflict with existing zoning for agricultural use, or a Williamson Act contract.</i>				
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is located in an area that consists of single- and multi-family residential and is designated R-1500</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>(Residential). Because the site is not zoned for agricultural use or under Williamson Act contract, the proposed project will be consistent with the existing zoning designations on site and for the surrounding area. Therefore, the proposed project would not result in the conversion of Farmland on- or off-site, to non-agricultural use.</i>				
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Could the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure. The project design is consistent with existing zoning and land use designation for the parcel, would generate approximately 16 ADT (8 ADT per residential unit), and the proposed use is consistent with the State Implementation Plan. No other potential sources of air pollutants have been identified from the project. The proposed project would not conflict with or obstruct implementation of any applicable air quality plans. Therefore, there would be no impact.</i>				
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>According to the South Coast Air Quality Management District (SCAQMD) CEQA Handbook, average daily PM<sub>10</sub> emissions during site grading and other disturbances are 26.4 pounds per acre. Enhanced dust control procedures such as continual soil wetting, use of supplemental binders, early paving, etc. can reduce PM<sub>10</sub> emissions to around</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>10.0 pounds per day per acre disturbed. The project site is approximately 0.2 acre. Therefore, with the proposed best available control measures (BACMs) construction of the proposed project would be substantially less than 10.0 pounds per day. This would be well below the San Diego Air Pollution Control District (SDACPD) threshold of 100 pounds per day for significant impacts from PM<sub>10</sub>. The potential for the proposed project to result in any violations or contribute substantially to an existing violation of an air quality standard would be less than significant.</i>				
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project is within the San Diego Air Basin, which is in attainment for federal one-hour ozone standards and in nonattainment/unclassified for federal 8-hour standards. The Basin is also in attainment for all state standards, with the exception of those standards for PM<sub>10</sub> and ozone. However, as stated above, the proposed project would not contribute substantially to emissions from construction or occupation of the residences. However, to ensure that construction of the proposed project would not result in cumulatively considerable net increase of ozone or PM<sub>10</sub> emissions mitigation measures would be required. Implementation of appropriate mitigation measures for potential construction related impacts to air quality would reduce impacts to below a level of significance. (See attached Summary of Mitigation</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>Measures)</i>				
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure. The project is not expected to emit any toxic air contaminant or substantial concentrations of particulate matter based on project description and information submitted. Therefore, this development will not result in the exposure of sensitive receptors to substantial pollutant concentrations.</i>				
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure. This development will not create objectionable odors that may affect a substantial number of people. Therefore, there is no impact associated with objectionable odors from the proposed project.</i>				
IV. BIOLOGICAL RESOURCES -- Could the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>The project site fronts the coast line of the Pacific Ocean. Based on a previous technical analysis prepared for the Palm and Carnation Avenues Street End Improvement Project, no California least tern or Western snowy plover adults, juveniles or nests were observed in the Palm and Carnation Avenue locations. It was determined that due to heavy use by humans and domestic animals that</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>these species are not expected to occur in the area. The proposed project site is approximately 95 feet north of the Palm Avenue street end and the California least tern and Western snowy plover would not be expected to occur within the project study area for similar reasons as those discussed above. However, the Pismo clam and the California grunion, California Department of Fish and Game designated game species, may occur within the intertidal area west of the project site. Construction of the proposed project may result in a substantial adverse effect to the Pismo clam and California grunion. Therefore, to reduce potential impacts to below a level of significance appropriate mitigation measures would be required. (See attached Summary of Mitigation Measures)</i>				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is located along the Pacific Ocean coast line. There is no riparian habitat or other identified sensitive natural community in the vicinity of the project site. Therefore, the project would have no impact on such natural habitat or communities. See response to IV.a. above.</i>				
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>There are no identified federally</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>protected wetlands within the project boundaries. Therefore, the proposed project would have no impact on federally protected wetlands.</i>				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is located along the Pacific Ocean coast line. There is no wildlife corridor or wildlife nursery site in the vicinity of the project site. Therefore, the project would have no impact on the movement of any native resident or migratory fish or wildlife species. See response to IV.a. above.</i>				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is currently undeveloped and contains no native trees or sensitive vegetation community. Therefore, the construction of the proposed project would not result in the loss of any biological resources that may be protected under a local policy.</i>				
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is within the MSCP study area and is designated as developed. Therefore, the proposed project would not result in any conflicts with the MSCP or other habitat conservation plans.</i>				
V. CULTURAL RESOURCES -- Could the project:				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Based on a previous technical analysis prepared for the Palm and Carnation Avenues Street End Improvement Project, it was determined that no historic resources occur in the Palm and Carnation Avenue locations. Palm Avenue is located south of the project site. Therefore, implementation of the proposed project will not result in significant impacts to historical resources as defined by Section 15064.5.</i>				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Based on a previous technical analysis prepared for the Palm and Carnation Avenues Street End Improvement Project, it was determined that no prehistoric or archaeological resources occur in the Palm and Carnation Avenue locations. Palm Avenue is located south of the project site. Therefore, implementation of the proposed project will not result in significant impacts to archaeological resources.</i>				
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>No paleontological resources or unique geologic features were identified within the previous technical analysis prepared for the Palm and Carnation Avenues Street End Improvement project. Palm Avenue is located south of the project site. Therefore, implementation of the proposed project will not indirectly destroy a unique paleontological resource or geologic feature.</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Disturbance of any human remains, including those interred outside of formal cemeteries will not occur because no burial sites were identified in the previous technical analysis prepared for the Palm and Carnation Avenues Street End Improvement project. Palm Avenue is located south of the project site. Therefore, implementation of the proposed project will not result in the disturbance of any human remains.</i>				
VI. GEOLOGY AND SOILS -- Could the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>According to the Alquist-Priolo Earthquake Fault Zoning Map (May 2003), there are no known faults in the project vicinity. Therefore, the proposed project would not expose persons or structures to the potential substantial adverse effects from rupture of a known earthquake fault.</i>				
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>As stated above, there are no known faults within the vicinity of the project site. Several major faults are present in the region to the west and northeast of the site, the closest of which is the Rose</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>Canyon fault zone, located approximately 1 mile to the east. The proposed project does have the potential to expose persons or structures to substantial adverse effects from strong seismic ground shaking; however, since the project will be required to adhere to the California Building Code to ensure that structures are built to withstand earthquakes with minimal loss of life, no significant impacts would occur.</i>				
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>As stated above, there are no known faults within the vicinity of the project site. Several major faults are present in the region to the west and northeast of the site, the closest of which is the Rose Canyon fault zone, located approximately 1 mile to the east. The proposed project does have the potential to expose persons or structures to substantial adverse effects from seismic-related ground failure (e.g., liquefaction); however, since the project will be required to adhere to the California Building Code to ensure that structures are built to withstand earthquakes with minimal loss of life, no significant impacts would occur.</i>				
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is relatively flat with no hillsides on site. Therefore, the proposed project would not result in the exposure of persons or structures to on site landslides.</i>				
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The project proposes a concrete seawall along the western boundary of the development area, adjacent to the Pacific ocean. The seawall would reduce the potential for substantial soil erosion</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<p><i>on site to below a level of significance. A Wave Runup &amp; Coastal Hazard Study was prepared by Skelly Engineering for the project. An addendum was prepared stating that the analysis conducted in the Wave Runup &amp; Coastal Hazard Study would still be valid if the wall were to be relocated to a more landward position than its original design location. According to the report, natural seasonal (winter) and annual erosion of approximately 1 to 2 feet per year occur along the shoreline of Imperial Beach. However, the project site located within a more stable area of the City's shoreline due to the groin compartment that has resulted from the construction of the off-shore protection groins at the Palm Avenue Street end to the south and north at the U.S. Naval Base. In addition to shoreline erosion, the proposed seawall would not exacerbate erosion on adjacent properties. The proposed seawall would be connected to the approved seawall associated with the residential development to the south. The residence to the north is protected by a low height revetment and wave runup shield, which deflects wave runup at the top of the revetment and along the sides of the structure. Though the structure to the north has historically been subject to overtopping and flooding, the proposed project would not measurably increase the vulnerability of the structure and will not exacerbate wave runup at this site. The addendum described above also provides a detailed discussion of why the property to the north of the project site will not be affected by the seawall. Therefore, the proposed project would not result in the substantial soil erosion or loss of topsoil. The complete Wave Runup &amp; Coastal Hazard Study and addendum, has been attached to this Initial Study as Appendix</i></p>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A.				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>According to the geotechnical report prepared by Ninyo and Moore (2002) for the Palm and Carnation Avenues Street End Improvement Project, the project vicinity is generally underlain by fill, beach deposits, and materials of the Quaternary-aged Bay Formation. There is the potential for liquefaction and associated dynamic settlement at the project site due to loose fill soils observed on the site. These soils would have the potential for settlement if subjected to structural loads in their present condition. The proposed project is located on a geologic unit or soil that is unstable, and could potentially result in on-site landslides, lateral spreading, subsidence, liquefaction, or collapse without mitigation. Additionally, due to geologic formation located within the project vicinity, the proposed project would require the installation of vertical sheet-pile systems, which would require the use of vibratory hammer. Therefore, the proposed project may result in off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. Therefore, to reduce potential impacts on-site and off-site to below a level of significance appropriate mitigation measures would be required. (See attached Summary of Mitigation Measures)</i>				
d) Be located on expansive soil, as defined in Chapter 18 of the Uniform Building Code (1997), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>According to Soil Survey maps prepared by the USDA (1973), the project site is located on soils designated as Marina loamy coarse sand (2 to 9 percent slopes) (MIC). This soil is not known to be an expansive soil type. Therefore, the proposed project would not create substantial risks to life or property from expansive soils.</i>				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project would rely on sewer service provided by the City of Imperial Beach and would not utilize any type of septic waste water disposal. Therefore, the project would not result in impacts to geology and soils from the use of septic on site.</i>				
VII. HAZARDS AND HAZARDOUS MATERIALS -- Could the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure. This development will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.</i>				
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>The proposed project is the development of a 2-unit attached residential structure. This development will not create a significant hazard to the public or the environment involving the release of hazardous materials.</i>				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure. This development will not emit hazardous emissions or involve the handling of hazardous materials or waste. Therefore, there is no potential effect from hazardous waste or materials on an existing or proposed school within one-quarter mile of the project site.</i>				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is currently unoccupied. It appears that no other land use operations have historically been developed on this site and the site has not been previously determined to contain hazardous materials. Therefore, the proposed project will not result in any significant hazard to the public or the environment.</i>				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>The proposed project is located within 2 miles of the Naval Outlying Land Field. However, the project would not result in any threats from safety hazards to the surrounding land uses or future occupants of the proposed development because the site is not located within the approach area of fixed wing aircraft.</i>				
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is located within 2 miles of the Naval Outlying Land Field. However, the project would not result in any threats from safety hazards to the surrounding land uses or future occupants of the proposed development because the site is not located within the approach area of fixed wing aircraft.</i>				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure. Access to the project site is proposed from Ocean Lane, which will not be obscured by development. Therefore, emergency response or emergency evacuation from the site would not be obstructed.</i>				
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is located in an area that consists of single- and multi-family residential. The proposed project is the development of a 2-unit attached residential structure. Therefore, the</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>proposed project would not result in activities that could create a risk of wildland fires.</i>				
VIII. HYDROLOGY AND WATER QUALITY -- Could the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The project site is currently undeveloped. A Water Pollution Control Plan (WPCP) was prepared for the project by Tri-Dimensional Engineering that satisfies the City of Imperial Beach Standard Urban Storm Water Mitigation Plan (SUSMP) regulations and is included as Appendix B to this Initial Study. The proposed project is a two-unit residential structure. Occupation of the project site would not result in the violation of water quality standards or waste discharge requirements. According to the WPCP (Appendix B), the existing drainage patterns on site would be maintained and the existing flow rate would be reduced with the construction of the proposed project. Furthermore, standard water quality requirements of the State and City require the developer to implement design measures to properly deter post-construction runoff from adjacent properties or from collecting on-site. Adherence to existing standards required by the State and City, as well as the size of the project, will result in less than significant impacts associated with surface runoff.</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project does not propose the use of groundwater. Therefore, the proposed project would not result in impacts to existing groundwater supplies.</i>				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site during or following construction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is currently undeveloped. According to the WPCP (Appendix B), the existing drainage patterns on site would be maintained and the existing flow rate would be reduced with the construction of the proposed project. Therefore, the alteration of existing drainage patterns would not result in substantial erosion or siltation on- or off-site during or following construction. Therefore, there would be no impact from the proposed project on existing drainage patterns.</i>				
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the surface runoff flow rates or volumes in a manner which would result in flooding on- or off-site during or following construction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>As stated above, the project site is currently undeveloped. According to the</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>WPCP (Appendix B) that satisfies the City of Imperial Beach Standard Urban Storm Water Mitigation Plan (SUSMP) regulations, the existing drainage patterns on site would be maintained and the existing flow rate would be reduced with the construction of the proposed project. Furthermore, standard water quality requirements of the State and City require the developer to implement design measures to properly deter post-construction runoff from adjacent properties or from collecting on-site. Adherence to existing standards required by the State and City, as well as the size of the project, will result in less than significant impacts associated with surface runoff.</i>				
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is a two-unit residential structure. The projected sewage flows and volumes for the proposed project are not anticipated to exceed City engineering standards. There are existing sewer lines capable of holding the current capacity of the neighborhood. Therefore, the proposed project would not create or contribute runoff that would exceed existing capacity of the storm water system.</i>				
f) Result in increased impervious surfaces and associated increase runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>As stated above, the project site is currently undeveloped and the construction of the proposed project will increase impervious surfaces on site. According to the WPCP (Appendix B), the existing drainage patterns on site and pre-development discharge rates</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>would be maintained and the existing flow rate would be reduced with the construction of the proposed project. However, the construction of the proposed project will result in significant impacts associated with increased impervious surfaces and surface runoff from the project site. Adherence to standard water quality requirements of the State and City require the developer to implement design measures to properly deter post-construction runoff from adjacent properties or from collecting on-site. Implementation of the Best Management Practices identified in the WPCP (Appendix B) will reduce this impact to a below a level of significance.</i>				
g) Tributary to an already impaired water body, as listed on the Clean Water Act Section 303(d) list? If so, could the project result in an increase in any pollutant for which the water body is already impaired?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The project site is adjacent to the Pacific Ocean, which is a Section 303(d) listed impaired water body. As stated above, the project site is currently undeveloped and the construction of the proposed project will increase impervious surfaces on site. However, the existing drainage patterns on site and pre-development discharge rates would be maintained and the existing flow rate would be reduced with the construction of the proposed project (WPCP, Appendix B). As identified in the WPCP, standard water quality requirements of the State and City require the developer to implement design measures to properly deter post-construction runoff from adjacent properties or from collecting on-site. Adherence to existing standards required by the State and City, as well as the size of the project, will result in less than significant impacts associated</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>with increased surface runoff.</i>				
h) Result in discharges into surface waters during or following construction, or in significant alternation of surface water quality including, but not limited to temperature, dissolved oxygen, turbidity or typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>As stated above, the project site is currently undeveloped and the construction of the proposed project will increase impervious surfaces on site. As identified in the WPCP (Appendix B), standard water quality requirements of the State and City require the developer to implement design measures to properly deter post-construction runoff from discharging into surface waters. Adherence to existing standards required by the State and City, as well as the size of the project, will result in less than significant impacts associated with increased runoff impervious surfaces and surface runoff to below a level of significance.</i>				
i) Cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The project site is adjacent to the Pacific Ocean, which has numerous identified beneficial uses. The project site is currently undeveloped and the construction of the proposed project will increase impervious surfaces on site. Water from the site will be controlled through on-site detention, cleansing, and de-polluting prior to entering the City's drainage system, which discharges into the Pacific Ocean. As identified in the WPCP (Appendix B), standard water</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>quality requirements of the State and City require the developer to implement design measures to properly deter post-construction runoff from adjacent properties or from collecting on-site. Adherence to existing standards required by the State and City, as well as the size of the project, will result in less than significant impacts associated with the proposed project's contribution to surface or groundwater receiving waters.</i>				
j) Have a potentially significant environmental impact on surface water quality, to either marine, fresh, or wetland waters? Can the project impact aquatic, wetland, or riparian habitat?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The project site is adjacent to the Pacific Ocean and the project site is currently undeveloped. As stated above, the proposed project would be required to conform to existing State and City water quality design measures. Adherence to existing standards required by the State and City, as well as the size of the project, will result in less than significant impacts associated the proposed project. Therefore, potential water quality impacts would be less than significant through project design.</i>				
k) Is project tributary to other environmentally sensitive areas? If so, can it exacerbate already existing sensitive conditions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site does not consist of any tributaries to any other environmentally sensitive area. The proposed project would not exacerbate any existing sensitive conditions beyond what has been discussed above. Therefore, the project would not result in any impacts to such existing sensitive areas.</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
l) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is located outside of the 100-year floodplain according to the maps prepared by the Federal Emergency Management Agency. Therefore, the project would not result in any impacts associated with a 100-year flood hazard.</i>				
m) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>As stated above, the project site is not located within the 100-year floodplain. The project does propose the construction of a concrete seawall along the western boundary of the development area, adjacent to the coast line. As stated in the Wave Runup &amp; Coastal Hazard Study (Appendix A), the proposed seawall is well landward of the Mean High Tide (MHT), which is approximately 133 ft. west of the western property line for the site. The Study further states that the seawall would not be touched by waves during most winter conditions. Therefore, the seawall would not significantly impede or redirect flood flows and impacts would be considered to be less than significant.</i>				
n) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>There is no levee or dam in the vicinity of the project site. Therefore, the proposed project would not expose persons or structures to significant risk as a result of flooding caused by a levee or dam.</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
o) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Seiche, tsunamis, and mudflows are not considered to pose a threat to the project vicinity or the project site. The storm shoreline protection system will further protect the proposed project from the potential hazard of high surf conditions. Therefore, inundation by seiche, tsunami, or mudflow is considered not to be an impact for the proposed project.</i>				
IX. LAND USE AND PLANNING - Could the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is located in an area that consists of single- and multi-family residential. The proposed project is the development of a 2-unit attached residential structure. Therefore, the proposed project would not physically divide an established community.</i>				
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is within the City of Imperial Beach, in a neighborhood designated as the Seacoast neighborhood, which consists of single- and multi-family residential. The proposed project will be consistent with the existing zoning designations and the City of Imperial Beach General Plan/Local Coastal Plan (GP/LCP). Therefore, the proposed project would not conflict with any applicable land use</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>plan or policy.</i>				
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is within the MSCP study area and is designated as developed. Therefore, the proposed project would not result in any conflicts with the MSCP or other habitat conservation plan or natural community conservation plan.</i>				
d) Conflict with any applicable regional water quality plan or Standard Urban Storm Water Mitigation Plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>As stated above, the project site is currently undeveloped and the construction of the proposed project will increase impervious surfaces on site. According to the WPCP (Appendix B), the existing drainage patterns on site and pre-development discharge rates would be maintained and the existing flow rate would be reduced with the construction of the proposed project. Standard water quality requirements of the State and City require the developer to implement design measures to properly deter post-construction runoff from discharging into surface waters. Adherence to existing standards required by the State and City, as well as the size of the project, will result in no conflicts with applicable regional water quality standards or mitigation plans. Therefore, the proposed project would result in no impact.</i>				
X. MINERAL RESOURCES -- Could the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>Based on the Mineral Land Classification: Aggregate Materials (1983) published by the California Department of Conservation – Division of Mines and Geology, the site is designated to be in a Mineral Resources Zone-3 (MRZ-3). Lands designated under this zone are classified as areas containing mineral deposits with significance which cannot be evaluated from available data. Therefore, at this time, it has been determined that the proposed project will not result in the loss of availability of any known mineral resources that would be of value to the region and the residents of the state.</i>				
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The City of Imperial Beach General Plan does not have any mineral resource recovery sites or land use designations for such uses. Therefore, the proposed project will not result in the loss of availability of a locally-important mineral resource recovery site.</i>				
XI. NOISE -- Could the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The existing ambient noise of the project area is typical of an urban beach community, characterized by vehicular traffic, natural environmental sounds such as the wind and ocean waves. The proposed development of a 2-unit residential structure will not result in a substantial increase in ambient noise. To</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>ensure no significant impacts to noise occur from construction of the proposed project, adherence to existing noise standards, as defined in the City of Imperial Municipal Code (Section 9.32.020). Therefore, potential impacts associated with noise from the construction and post-construction of the proposed project would be less than significant.</i>				
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure on a parcel that is currently undeveloped. The proposed project requires the installation of vertical sheet-pile systems, which would require the use of vibratory hammer. Therefore, the proposed project may result in exposure of persons to the generation of groundborne vibration. Therefore, to reduce potential impacts to below a level of significance appropriate mitigation measures would be required. (See attached Summary of Mitigation Measures)</i>				
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The existing ambient noise of the project area is typical of an urban beach community, characterized by vehicular traffic, natural environmental sounds such as the wind and ocean waves. The proposed development of a 2-unit residential structure will not result in a substantial increase in ambient noise. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity. No permanent impact is</i>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>expected to occur.</i>				
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>As stated above, the proposed development of a 2-unit residential structure will not result in a substantial increase in ambient noise, but could result in a substantial increase in noise levels due to project construction. Therefore, to reduce potential impacts to below a level of significance appropriate mitigation measures would be required. (See attached Summary of Mitigation Measures)</i>				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is located within 2 miles of the Naval Outlying Landing Field. The project would not expose persons to excessive noise levels from this airport because it is not in the flight path of fixed wing aircraft. Therefore, the project would not result in noise impacts.</i>				
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The project site is not located within the vicinity of a private airstrip. Therefore, the project would not expose persons to excessive noise levels from a nearby private airstrip. Therefore, the project would not result in noise impacts.</i>				

XII. POPULATION AND HOUSING -- Could the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential in an area that consists of single- and multi-family residential. All necessary roads and infrastructure to support the residential development on the project site are present. Therefore, the proposed project would not directly or indirectly result in the inducement of substantial population growth.</i>				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project does not involve the removal of any existing residential units. Therefore, the proposed project would not result in the displacement of existing housing.</i>				
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential on an undeveloped parcel. Therefore, the proposed project would not result in the displacement of existing residents.</i>				
XIII. PUBLIC SERVICES				

a) Could the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. The proposed project would not increase the need for new or altered fire protection facilities. Therefore, the proposed project would not result in a substantial impact to fire protection services and impacts would be considered less than significant.</i>				
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. The proposed project would not increase the need for new or altered police protection facilities. Therefore, the proposed project would not result in a substantial impact to police protection services and impacts would be considered less than significant.</i>				
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. The proposed project would not increase the need for new or altered school facilities and would be required to pay school fees at the time of building permit. Therefore, the proposed project would not result in a substantial impact to educational services and</i>				

<i>impacts would be considered less than significant.</i>				
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. The proposed project would not increase the need for new or altered park facilities. Therefore, the proposed project would not result in a substantial impact to parks and recreational services and impacts would be considered less than significant.</i>				
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. Therefore, the proposed project would not result in a substantial impact to any other public facilities and impacts would be considered less than significant.</i>				

XIV. RECREATION --				
a) Could the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. The proposed project would not increase the use of existing neighborhood parks or recreational facilities in a manner that would accelerate deterioration of such facilities. Therefore, the proposed project would not result in a substantial impact to parks and recreational facilities.</i>				
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. The proposed does not include construction of any recreational facilities. Therefore, the proposed project would not result in a substantial impact associated with the construction of recreational facilities.</i>				
XV. TRANSPORTATION/TRAFFIC -- Could the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project would result in a maximum 16 ADT (8 ADT per residential unit). According to a technical study prepared for the Palm and Carnation</i>				

<i>Avenues Street End Improvement Project, all project study area roadways and intersections operate at acceptable Levels of Service (LOS). Therefore, the proposed project would not increase the traffic volume by more than 2% and, thereby, cause a substantial increase in traffic on study area roadways and intersections and impacts would be considered less than significant.</i>				
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>As stated above, the proposed project would result in a maximum 16 ADT (8 ADT per residential unit) and would not impact roadways or intersections in the project study area by more than 2%. Temporary construction traffic would be generated by this project. However, the relatively short amount of time and few numbers of truck trips during construction would not cause a significant traffic impact. Therefore, the proposed project would not exceed either individually or cumulatively the level of service for the study area roadways and impacts would be considered less than significant.</i>				
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project would not involve air traffic and would not affect existing air traffic patterns. Therefore, the proposed project would result in no impacts associated with existing air traffic patterns or levels.</i>				
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project will be developed within the identified undeveloped parcel</i>				

<i>and would not involve the construction of any roadways. Also, the proposed project is consistent with the residential development that currently exists within the neighborhood. Therefore, the project would not result in any impacts associated with roadway hazards or incompatible uses.</i>				
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project would be accessible from the alley that runs along the eastern boundary of the project site. Emergency access to the project site and surrounding residences would not be affected by the proposed project.</i>				

f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project includes one 2-car garage for each residential unit on the first floor of the structure. Therefore, the proposed project will result in no impact to parking.</i>				
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure within the identified undeveloped parcel. Development of the proposed project would not involve or impede plans, policies, or the design and construction of alternative transportation features.</i>				
XVI. UTILITIES AND SERVICE SYSTEMS -- Could the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. As identified in the WPCP (Appendix B), adherence to existing standards required by the State and City, as well as the size of the project, will result in no exceedances of wastewater treatment requirements. Therefore, the proposed project would result in no impact.</i>				
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. Existing water and wastewater treatment facilities have sufficient capacity to support the proposed project. Therefore,</i>				

<i>construction of new water or wastewater facilities would not be required as a result of the proposed project and the project would have no impact.</i>				
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. Construction of on-site storm water drainage facilities would be required per SUSMP regulations as a result of the proposed project. Additionally, the existing storm water drainage facilities on Palm Avenue will be reconstructed to include a sewer diverter through the street ends project and would have sufficient capacity to support the proposed project.</i>				
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. Existing water supplies are sufficient to support the small demand generated by the proposed project. Therefore, the proposed project would have no impact.</i>				
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. Existing wastewater treatment facilities have adequate capacity to support the small demand generated by the proposed project. Therefore, the proposed project would</i>				

<i>have no impact.</i>				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure in an already developed residential neighborhood. Existing landfill capacity is sufficient to support the small quantity of solid waste generated by the proposed project. Therefore, the proposed project would have no impact.</i>				
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is the development of a 2-unit attached residential structure. The small quantity of solid waste generated by the proposed project would not exceed or conflict with any applicable federal, state, or local statutes or regulations. Therefore, the proposed project would have no impact.</i>				
XVII. MANDATORY FINDINGS OF SIGNIFICANCE --				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>As stated above, the proposed project is not expected to affect any rare or endangered plant or animal species. Construction of the proposed project may potentially result in impacts to the Pismo clam and/or the California grunion (CDFG designated game species). These potential impacts would not substantially reduce the habitat of the above listed species or cause the populations of the above listed species</i>				

<i>to drop below self-sustaining levels. Additionally, the proposed project would not result in any impacts to cultural resources, including prehistoric, historic, or paleontological resources.</i>				
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project is a two-unit residential development on an undeveloped parcel in an area currently developed with single- and multi-family development. All potential impacts would be mitigated to below a level of significance. Also, the project, when viewed in connection with the effects of cumulative projects within the project study area would not result in any substantial adverse impacts as it was listed as one of the projects analyzed for cumulative impacts in the Revised Final EIR for the Palm Avenue and Carnation Avenue street ends project. Therefore, project would not result in any cumulatively considerable effects.</i>				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The proposed project is a two-unit residential development on an undeveloped parcel in an area currently developed with single- and multi-family development. The proposed project would not result in any environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.</i>				

## REFERENCES

City Of Imperial Beach General Plan and Local Coastal Plan, October 19, 1994.

SANDAG. Water Quality Element – Regional Growth Management Strategy. November 1997.

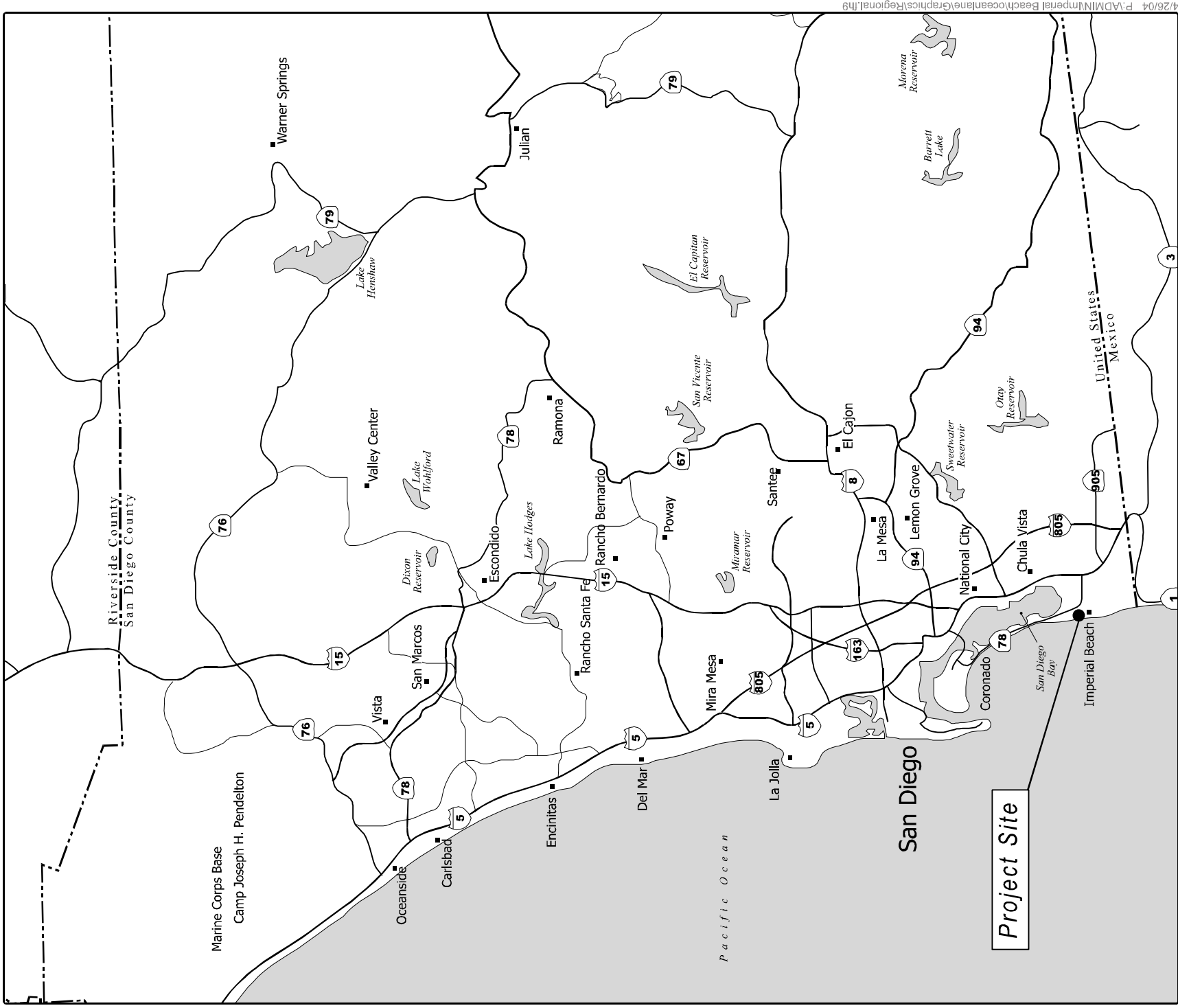
California Regional Water Quality Control Board. Order No. 2001-01. "Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the incorporated cities of San Diego County, and the San Diego Unified Port District." February 21, 2001.

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Mooney and Associates. Draft Environmental Impact Report for the Palm and Carnation Avenues Street End Improvement Project. October 2002.

Mooney and Associates/San Diego Unified Port District. Revised Final environmental Impact Report For the Palm and Carnation Avenues Street End Improvement Project (SCH# 2002031106/UPD#83356-545). January 2006

# FIGURES



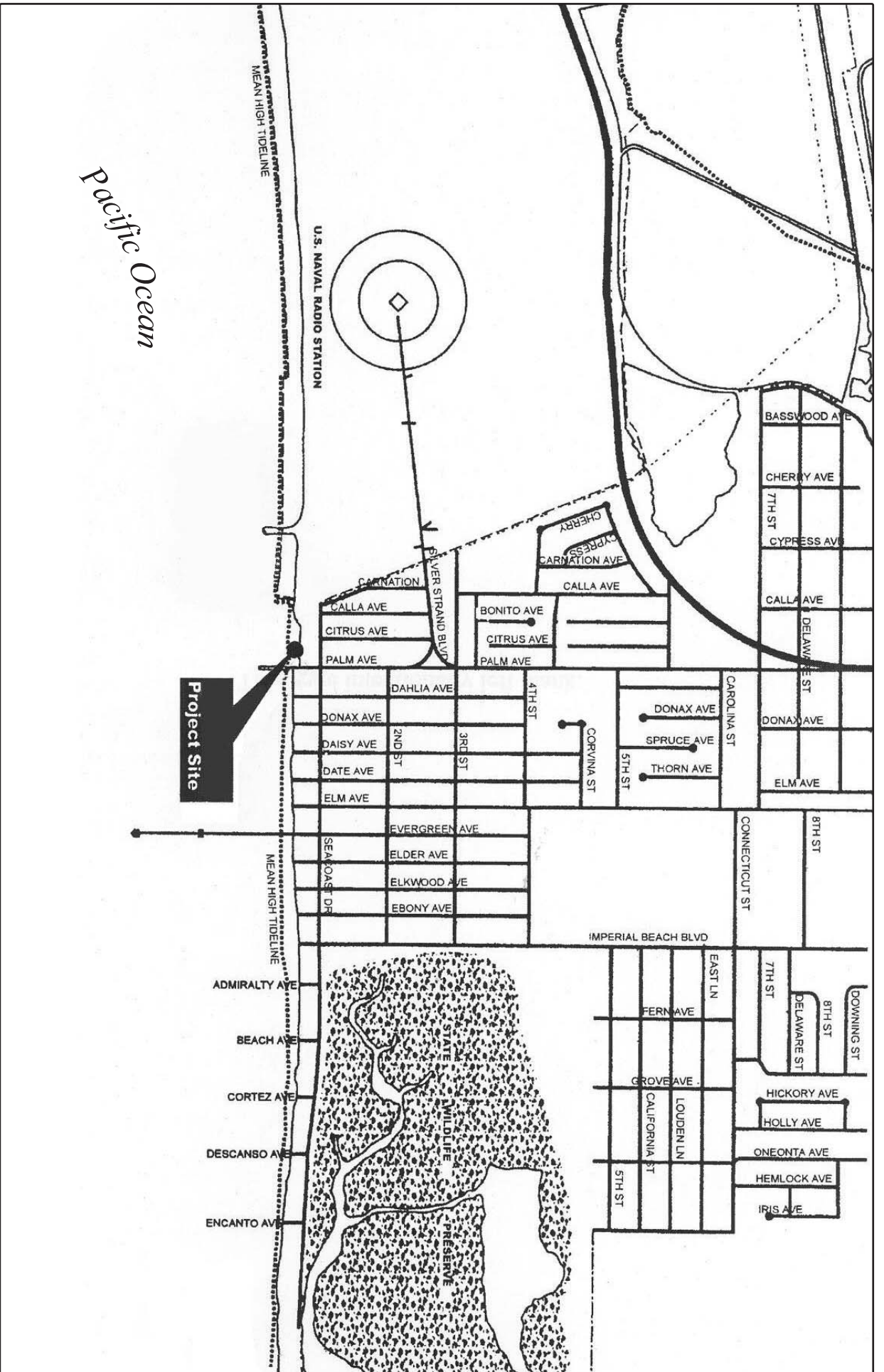
No Scale

Regional Map



P&D Environmental Services

Figure 1



Source: Mooney & Associates



No Scale



P&D Environmental Services

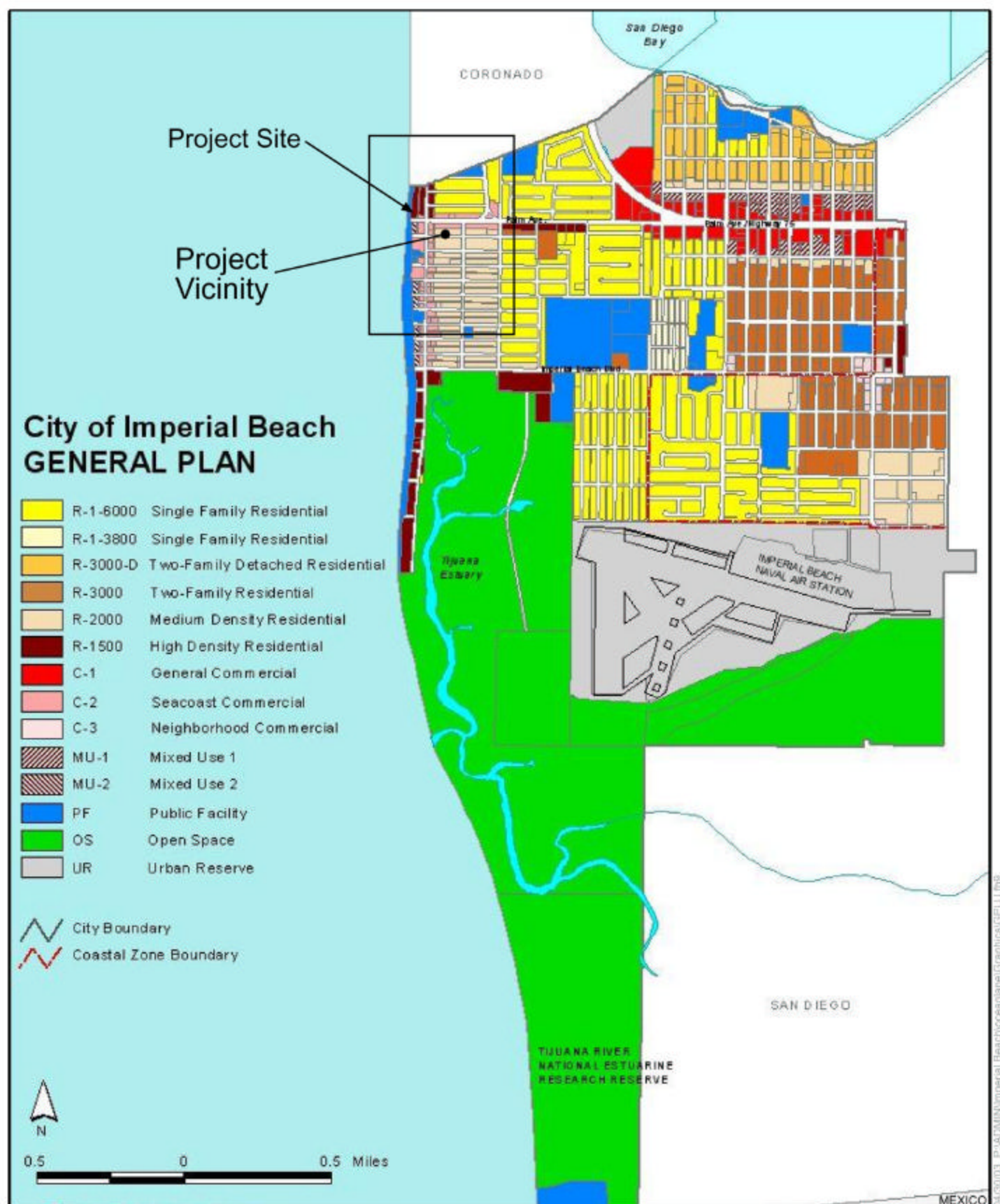
Vicinity Map

Figure 2





Project Elevations for 684/686 Ocean Lane  
Figure 4



General Plan  
Land Use Designation

## **APPENDIX A**

### **Wave Runup & Coastal Hazard Study and Addendum** Skelly Engineering

## **GeoSoils Inc.**

March 10, 2006

Mr. Jim Nakagawa  
City of Imperial Beach  
825 Imperial Avenue  
Imperial Beach, CA 91932-2797

SUBJECT:                   Second Addendum to Wave Runup & Coastal Hazard Study, and Response to City of Imperial Beach Community Development Department Review, Johnson Duplex (MF 701/CP 04-58/DRC 04-59? SPR 04-06/EA 04-61), 684-686 Ocean Lane, Letter dated February 12, 2006.

Dear Mr. Nakagawa;

This letter is in response to the your February 12, 2006 letter requesting additional information concerning the proposed seawall at the subject property. Specifically, this is in response to Item A 4 on page 2 of your letter.

The calculations, conclusions, and recommendations in the Wave Runup and Coastal Hazard Study remain valid for the seawall in the newly proposed, more landward, position. As a matter of fact it was assumed by the undersigned that the wall would likely be required to be located at the currently proposed position. The project management team will provide a drawing showing the location of the proposed seawall in plan view and the shore protection on the adjacent properties. The attached letter to you, dated October 7, 2004, thoroughly discusses the impacts of the proposed project on the ONeal residence, and remains valid for the proposed new location of the seawall. The project management team will provide the details of how the condition of the ONeal property will be surveyed before and after the driving of the sheet piles.

Thank you for this opportunity to provide further clarification for the proposed project. Please call me if you have any questions regarding this addendum.

Sincerely,

David W. Skelly MS, PE

**5741 Palmer Way, Suite D, Carlsbad CA 92008**

**Phone 760-438-3155**

# GeoSoils Inc.

October 7, 2004

Mr. Jim Nakagawa  
City of Imperial Beach  
825 Imperial Avenue  
Imperial Beach, CA 91932-2797

SUBJECT: Addendum to Wave Runup & Coastal Hazard Study, and Response to City of Imperial Beach Community Development Department Review, Johnson Duplex (MF 701/ CP 04-58/DRC 04-59? SPR 04-06/EA 04-61), 684-686 Ocean Lane, Letter dated June 12, 2004.

REFERENCES: Griggs, G. B., Tait, J.F., Moore, L.J., Scott, K., Corona, W., and Pembroke, D. 1997. Interaction of Seawalls and Beaches: Eight Years of Field Monitoring, Monterey Bay, CA, Contract Report CHL-97-1, U.S. Army Engineer waterways Experiment Station, Vicksburg, MS, 34 pp.

SANDAG 2002, "State of the Coast Report Spring 2002, Beach and LAGOON Mouth Monitoring Program" 44 pgs + Appendices

Wiegel, R., January 2002, "Seawalls, Seaciffs, Beachrock: What Beach Effects? Part I, Part 2, & Part 3", Shore & Beach, Vol. 70, Nos. 1, 2, & 3.

Dear Mr. Nakagawa;

This letter is in response to the your request for additional information concerning the impacts of the proposed seawall on the adjacent shore protection structure. In particular you requested more specific information with regards to the property to the north of the proposed project, the ONeal house. The review letter also requested information on construction impact monitoring. As part of the response you requested that a plan view of the proposed shore protection and adjacent shore protection be provided. The project architect, Jeff Fischvogt, will supply the requested plan view as sheet SP-1 and SP-2. The information provided herein is an addendum to the Wave Runup & Coastal Hazard Study provided by this office and unless specifically superceded herein the conclusions and recommendations in that study provided are valid. The response provided herein will first discuss the impact of seawalls in general and then provide a specific discussion of potential impacts to the ONeal property as a result of the proposed project.

## SEAWALL IMPACTS

Recent scientific studies, including an eight year seawall monitoring study by Gary Griggs (Griggs, et. al., 1997), and an extensive analysis and discussion in a three part paper by Professor Robert Weigel (Weigel 2002), find that for the most part seawalls on

**5741 Palmer Way, Suite D, Carlsbad CA 92008**

**.Phone 760-438-3155**

the California coast do not cause or contribute to beach erosion. Griggs concluded that "there have been no permanent effects on the beaches studied" due to seawalls/revetments. Professor Weigel states that "In the authors judgement, seawalls do not cause erosion, except in the special circumstances where they prevent erosion of an upland source of sand, or are so situated that they act as a groin." These special circumstances do not occur at the subject site because the proposed wall will be located at the back of the beach and only subject to wave activity when the beach is already eroded. As noted by Griggs and Weigel, the performance of seawalls is directly related to design, location, oceanographic and geomorphological conditions (including independent seasonal and long-term changes in beach profiles), quality of construction, and maintenance over the life of the structure, among other salient factors. In addition, both authors point out that there is very little difference between how a seawall interacts with the beach and how a revetment (quarry stone) interacts with the beach. The proposed seawall will not erode the beach but rather will substantially reduce the wave induced flooding of the site and the low lying areas behind the site.

The seawall proposed as part of the overall project for the subject site is similar to other recently permitted seawalls and built in Imperial Beach and Del Mar, which are located at the back of the beach. Seawalls and other shore protection devices have existed at and near the subject site for over two decades. The vast majority of the properties fronting the ocean in Imperial Beach have some form of shore protection. The shoreline in front of the proposed seawall site is indistinguishable from the sites that do not have seawalls. Finally, there has been no identified cumulative impacts to the beach or coastal processes due to all of these existing shore protection systems. For this reason, cumulative impacts due to the proposed project, even in conjunction with the Palm Avenue street end project and adjacent condominium project, will not be significant.

The SANDAG and US Army Corps of Engineers beach monitoring programs have revealed that the advance and retreat of the shoreline has varied greatly over the last several decades as a result of beach nourishment projects and erosion from waves. Typical winter erosion of the Imperial Beach shoreline is reported to be about 130 cubic meters per meter of beach. Typical summer accretion is less than 130 cubic meters per meter of beach. This inequality is verified by a net annual erosion of the shoreline on the order of 1 foot per year. However, this particular site is located within a groin compartment which contributes significantly to the stability of the beach fronting the site and therefore the overall erosion rate is less than the typical rate. The Army Corps of Engineers sand replenishment project will provide significant benefit to the public beach. The post nourishment mean high tide line will be even further seaward than it presently is, and the frequency with which waves reach the seawall will be significantly reduced.

The mean high tide line (the +1.87 MSL contour) is currently located over 120 feet from the location of the proposed seawall. The LCP mean high tide line is about 60 feet

seaward of the proposed seawall. The base of the proposed seawall is at elevation ~+9' MSL. The beach slope in this area is flatter than 1/15 which places the mean high tide line (+1.87 MSL contour) ~100 feet further seaward of the proposed wall location. As further evidence, the seaward location of the mean sea level line is documented in the SANDAG profiles (SANDAG 2002) which show the mean sea level beach width in the project vicinity varies from as narrow as 116 feet in the spring of 1998 to as wide as 319 feet in the fall of 2001. In other words, the proposed project is located well landward of the mean high tide line.

### **PROJECT IMPACTS TO ONEAL PROPERTY**

There is no expected oceanographic impact of the proposed seawall on the ONeal site. It is important to point out that the ONeal site is already significantly vulnerable to wave runup and overtopping. It has been flooded in the past and will likely be flooded in the future. The finished first floor is low as compared to adjacent structures. Ms. ONeal has had to place sand bags "5 or 6 bags high" to prevent flooding of the interior of the residence in the recent past. In addition, the revetment fronting the ONeal site is lower and further landward than the revetment to the north. The front of the ONeal house has a wave deflector and in the past about 40 cubic yards of concrete was poured between the revetment and the house to prevent undermining of the foundation. The wave deflector does not direct the wave runup entirely seaward but being shaped like the bow of a boat deflects some of the waters onto the adjacent properties.

The toe of the revetment fronting the ONeal property is estimated to be about 12 feet back from the seaward face of the proposed seawall. The revetment toe fronting the property to the north of the ONeal property extends about 20 feet seaward of the ONeal shore protection. This is to say that the proposed seawall is more landward than the revetment to the north of the ONeal property. This revetment extends further onto the beach than the proposed seawall. This revetment has not been identified as a source of adverse wave impact on the ONeal property. There are many examples of this type of configuration of shore protection along the shoreline of Imperial Beach. That is shore protection that is set further back than the adjacent shore protection. This can be seen at the Seacoast Inn, the Imperial Beach Club, and even at the north side of the foot of palm prior to the construction of the new seawall. The timber bulkhead at the Seacoast Inn is more seaward than the city park just to the north. To our knowledge, the presence of the seawall at the Seacoast Inn has not resulted in exacerbated wave runup and overtopping at the park.

The street ends on the southern half of Seacoast Drive provide other relatively good examples of similar conditions and what can be expected on the ONeal property. The shore protection at the street ends is lower (like the ONeal protection) than the protection on the properties to either side. When extreme waves reach the shoreline they overtop the

street end revetment (like they do the ONeal's revetment) and flow back to Seacoast Drive. The waves that hit the higher revetments on either side of the street end are reflected back seaward. The amount of wave runup and overtopping is not exacerbated by the presence of the higher revetments on either side that are not overtopped. Quite simply wave energy does not easily move sideways but rather predominantly moves in an onshore and offshore direction. There is no basis in fact for expecting the proposed seawall to exacerbate wave runup onto ONeal property. Rather the opposite is true. The configuration of the ONeal shore protection, with the bow like feature, is more likely to deflect some wave runup at the adjacent shore protection.

It is our opinion, backed by fact, that the ONeal site is subject to significant flooding. This flooding is due to the low height of the revetment fronting the ONeal site (inadequate shore protection and low structure first floor elevation) and the adjacent vacant properties. Significant wave overtopping and associated flooding will occur in the future on the ONeal site regardless of the construction of a seawall on the adjacent property. It is also our opinion that the construction of the seawall will not cause or promote additional wave overtopping on the ONeal site. The waves that strike the wall will be reflected back offshore and not towards the ONeal property. There is no basis in fact to expect wave energy to "funnel" to the ONeal site. The incoming wave will strike the seawall and the ONeal revetment simultaneously ( the toe of the ONeal revetment is almost in line with the face of the seawall). At the seawall the wave energy will reflect back seaward, not sideways. At the ONeal revetment, extreme waves will runup over the revetment, strike the wave deflector, and be directed to the adjacent lot to the north and proposed seawall.

Finally, it is likely that the amount of wave runup water that reaches Ocean Lane will be reduced by the presence of the proposed seawall. Wave striking the seawall will be reflected back offshore and not allowing water to overtop the beach berm and flow back to Ocean Lane. This reduction of water volume will allow for faster draining and reduce the overall standing water height at Ocean Lane. This will be a benefit to the ONeal site.

The concerns expressed by Ms. ONeal are not supported by any facts. There has been no evidence provided to support her concerns. Seawalls, when properly designed and situated, provide protection, not only from direct wave attack but also flooding, for improvements behind the seawall including residences, public streets, and infrastructure. Seawalls and revetments have been in place in Imperial Beach for decades and not one of these structures has been shown to cause the beach to erode or to cause damage to the adjacent property. There will be no cumulative impacts to the coastal processes as a result of this project or the Palm Avenue coastal access project and the newly approved condominium project. The seawall will not impact any future beach nourishment efforts in that the wall is located landward of the nourishment efforts.

In summary, the shore protection in front of the ONeal house is too low to prevent flooding and overtopping, the finished first floor of the ONeal house is low, the site is significantly vulnerable to wave induce flooding, the site has been subject to wave runup and overtopping in the past and the site will be subject to wave runup in the future, regardless of what occurs on the adjacent property, unless the shore protection in front of the ONeal house is improved. There is no expected oceanographic impact of the proposed seawall on the ONeal site.

## CONSTRUCTION IMPACT MONITORING

The construction of the seawall will take place during normal working hours and under the conditions imposed by the City of Imperial Beach and other regulatory agencies, as necessary. The driving of the sheet pile is not anticipated to create any substantial nuisance noise or damage. Recent sheet pile seawall construction has taken place in Imperial Beach within a few feet of adjacent structures with no reported damage. Ms. ONeal's house is a minimum of 5 feet away from the proposed seawall construction. Recent projects in Del Mar have required the applicant to survey the adjacent properties prior to seawall pile installation. The City may want to contact Bob Scott at the City of Del Mar for the wording of the special condition of permit.

Thank you for this opportunity to provide further clarification for the proposed project. Please call me if you have any questions regarding this addendum.

Sincerely,

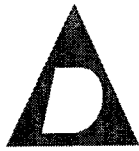


David W. Skelly MS, PE



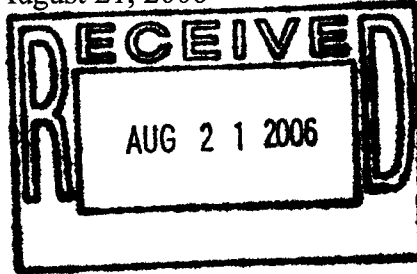
## **APPENDIX B**

### **Water Pollution Control Plan (WPCP)** Tri-dimensional Engineering, Inc



***Tri-Dimensional Engineering, Inc.***  
ENGINEERING • PLANNING • SURVEYING

August 21, 2006



Jim Nakagawa  
City of Imperial Beach  
825 Imperial Beach Blvd  
Imperial Beach, CA 91932

Re: Response to City WPCP comments dated 7/10/2006, by Sevy Chavez

Dear Jim:

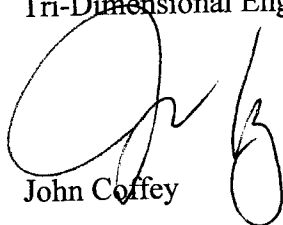
In response to Sevy Chavez's review comments related to the WPCP, we are attaching 4 revised copies of the WPCP, and have addressed Mr. Chavez's comments as follows:

- 1.) We have removed the exhaustive discussion of general federal rules and regs and reduced it to a description of issues specific to this project and the City of IB's regulatory authority.
- 2.) We have added information regarding the 303(d) listed waters. The 2002 303(d) list includes in its impaired water bodies a portion of the San Diego Bay in a park underneath the Coronado Bridge, over an area of 0.38 miles. Due to this site's location 6 miles south of that park, for the purposes of determining if a SWPPP is needed, we have determined that the site's runoff does not directly discharge to 303(d) listed waters.
- 3.) With regard to the seawall construction, it was determined in a wave and tidal report by David Skelley that the site is above the tidal range, even during winter. However, because of sometimes unpredictable ocean activity during winter, we have recommended that if wall construction occurs during that season, that a temporary rubble berm be created around the construction site. This information has been added to the report and plans.
- 4.) We have revised our report to reflect the conditions established in the new 2003 County Hydrology Manual.
- 5.) The BMPs listed in the report, both during and post-construction, are specific to the project. There are no BMPs listed which are not relevant or anticipated as possibilities.
- 6.) With regard to the drainage areas established on the drainage maps, area A storm water will either have an opportunity to flow through landscaped areas, or will land on the proposed permeable concrete driveway. This area proposes porous concrete so that low-flow runoff volumes do not flow directly into the alley untreated. This remains unchanged from the last plan.
- 7.) Again, with regard to protection of the site from wave and tidal action, see item 3 above for a description of how we handled this concern.

August 21, 2006  
Page 2 of 2

If we can be of further service, please feel free to contact us. Thank you.

Sincerely,  
Tri-Dimensional Engineering, Inc.

  
John Coffey



***Tri-Dimensional Engineering, Inc.***  
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Water Pollution Control Plan (WPCP)

**Duplex 684/686 Ocean Lane**

**684/686 Ocean Lane**

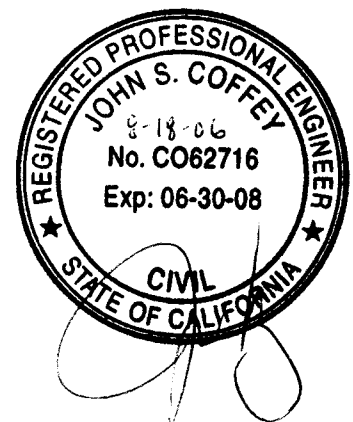
**Imperial Beach, California 91932**

(construction of condominium structure, hardscape, etc)

(disturbed area = 0.11 acres)

Prepared for:

Edwin Johnson  
and  
the City of Imperial Beach



Prepared by:

**Tri-Dimensional Engineering, Inc.**  
**August 18, 2006**

## TABLE OF CONTENTS

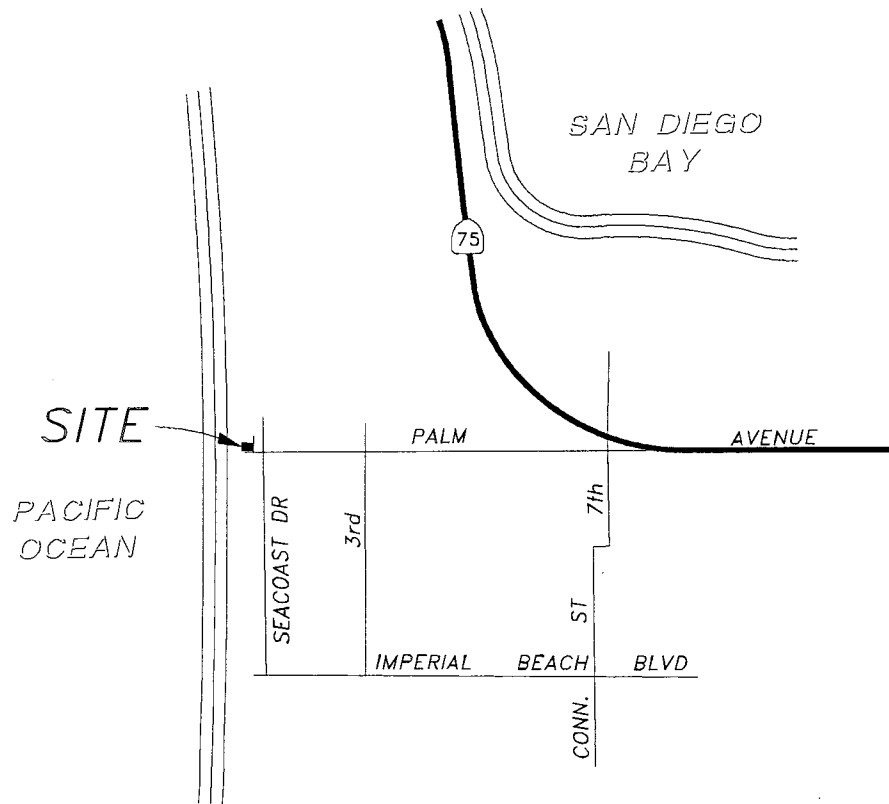
<b>1. DESCRIPTION OF PROPOSED PROJECT</b>	<b>1</b>
1.1 Use of Document	1
1.2 Project Location/Vicinity Map	1
1.2.1 Physical Features	1
1.2.2 Land Use	2
<b>2. APPLICABLE LAWS, REGULATIONS, POLICIES, AND REQUIREMENTS</b>	<b>2</b>
2.1 FEDERAL LAWS AND REGULATIONS	2
2.1.1 Clean Water Act	2
2.2 STATE LAWS AND REGULATIONS	2
2.2.1 California Water Code – Porter Cologne Water Quality Control Act of 1969.	2
2.2.2 Regional Permit	2
2.2.3 State Impaired Waterbodies “303(d)” list	2
<b>3. POTENTIAL EFFECTS TO THE WATER QUALITY ENVIRONMENT</b>	<b>3</b>
3.1 Watershed Contribution and Beneficial Uses	3
3.1.1 Surface Waters	3
3.1.2 Groundwater	4
<b>4. CHARACTERIZATION OF PROJECT RUNOFF</b>	<b>4</b>
4.1 Existing Storm Water Quality at Outfalls	4
4.2 Existing Tributary Drainage Area to Outfall	4
4.3 Identification of Future Pollutants	4
4.4 Site Hydrology	5
4.5 Water Quality Treatment Volume Based on Water Quality Storm Design	5
4.5.1 Hydraulic Analysis	5
4.5.1.1 <i>Method</i>	5
4.5.1.2 <i>Pre-Construction Conditions</i>	6
4.5.1.3 <i>Post-Construction Conditions – for Rate Control</i>	7
4.5.1.4 <i>Post-Construction Conditions – for Treatment</i>	8
4.6 Adjacent Land Use	9
4.7 Soil Characteristics	9
<b>5. MITIGATION MEASURES TO PROTECT WATER QUALITY</b>	<b>9</b>
5.1 Pollution Prevention [Point-Source] BMPs (MEP Based)	9
5.1.1 During-Construction Source-Control BMPs	9
5.1.2 Post-Construction Source Control BMPs/Site Design BMPs	10
5.2 Treatment BMPs	10
5.2.1 During-Construction Treatment BMPs	10
5.2.2 Post-Construction Treatment BMPs	10
<b>6. MAINTENANCE STORMWATER MANAGEMENT PROGRAM</b>	<b>11</b>

6.1	Maintenance Responsibility	11
6.1.1	Charter	11
6.1.2	Maintenance Activities per BMPs	11
7.	FISCAL RESOURCES	12
7.1	Agreements	12
7.2	Schedule and Cost	12
8.	PROGRAM EVALUATION	12
8.1	Preparer of Document	12
8.2	Maintenance and Evaluation Contact	12
9.	REFERENCES	13
10.	LIST OF TABLES / FIGURES / DRAWINGS	
10.1	MAPS	
	DRAINAGE MAP 'A'	
10.2	TABLES	
	TABLE 'A' – BMP SCHEDULE AND COST ESTIMATE	
	TABLE 'B' – BMP INSPECTION, MAINTENANCE, REPLACEMENT PROCEDURES	
10.3	APPENDICES	
	APPENDIX 'A' – TABLES, CHARTS, GRAPHS, USED IN HYDRAULIC DESIGN	
	APPENDIX 'B' – CALTRANS GUIDES (NOTES AND DETAILS FOR SITE BMPs)	
	SS-1 <i>Scheduling</i>	
	SS-8 <i>Wood Mulching</i>	
	SC-1 <i>Silt Fence</i>	
	SC-6 <i>Gravel Bag Berm</i>	
	SC-7 <i>Street Sweeping and Vacuuming</i>	
	WE-1 <i>Wind Erosion Control</i>	
	TC-1 <i>Stabilized Construction Entrance</i>	
	NS-1 <i>Water Conservation Practices</i>	
	NS-3 <i>Paving and Grinding Operations</i>	
	NS-7 <i>Potable Water/Irrigation</i>	
	WM-1 <i>Material Delivery and Storage</i>	
	WM-2 <i>Material Use</i>	
	WM-3 <i>Stockpile Management</i>	
	WM-4 <i>Spill Prevention and Control</i>	
	WM-5 <i>Solid Waste Management</i>	
	WM-6 <i>Hazardous Waste Management</i>	
	WM-8 <i>Concrete Waste Management</i>	
	WM-9 <i>Sanitary/Septic Waste Management</i>	
	WM-10 <i>Liquid Waste Management</i>	
	APPENDIX 'C' – NOTES	
	(Contractor, Owner, or Resident notes)	
10.4	ENCLOSURES	
	(C.1) PERMANENT BMP PLAN	
	(C.2) CONSTRUCTION BMP PLAN	

## 1. DESCRIPTION OF PROPOSED PROJECT/INTRODUCTION

**1.1 Use of Document** – This document has been prepared specifically for the project site indicated. The permitted site plan, and permitted Construction BMP Plan and Permanent BMP Plan shall remain a full part of, and reference for, this document.

**1.2 Project Location** – The Project is located on a beachfront site in the City of Imperial Beach, two lots north of the west terminus of Palm Avenue, about a stone's throw from the Pacific Ocean. The site address is 684/686 Ocean Lane (Duplex), Imperial Beach, CA 91932. The assessor's parcel number is 625-011-16. The Thomas Bros. Coordinates are 1329-E7.



**1.2.1 Physical Features** – The site is an undisturbed (by development) 0.13-acre parcel on a beachfront. Beach sand has consumed much of the site from no use. Except for beach rock and a six-foot high slope running through the middle of the site from northwest to southwest, the site is relatively flat.

- 1.2.2 Land Use** – The site’s zoning is designated Imperial Beach R-1500 (high density residential). Surrounding and nearby properties also conform to these designations, though there is a restaurant property across the alley.

## **2. APPLICABLE LAWS, REGULATIONS, POLICIES, AND REQUIREMENTS**

### **2.1 FEDERAL LAWS AND REGULATIONS**

- 2.1.1 Clean Water Act** – Created in 1977, the Clean Water Act established the basic structure for regulating discharges of pollutants into the waters of the United States, which mandated owners of Municipal Separate Storm Sewer Systems to regulate discharges from their district areas. In this case, it establishes the authority of the City of Imperial Beach, under the direction and supervision of the California State Water Resources Control Board and its regulations, to oversee, monitor, and regulate discharges from projects and sites within its jurisdiction, both during and after project construction.

### **2.2 STATE LAWS AND REGULATIONS**

- 2.2.1 California Water Code – Porter Cologne Water Quality Control Act of 1969** – This act establishes a comprehensive program for the protection of water quality and beneficial uses of water in the State of California. It applies to surface waters (including wetlands), groundwater, and point and non-point sources of pollution. The Regional Boards regulate discharges under Porter-Cologne primarily through the issuance of waste discharge requirements. Porter-Cologne provides several means of enforcement, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecution.
- 2.2.2 Regional Permit** – Activities and uses on this site that impact water quality are overseen by Region 9 (San Diego) of the California State Water Resources Control Board (SWRCB). Projects with areas of disturbance of greater than 1 acre, or projects less than 1 acre which discharge directly into 303(d) list waters, must secure their own discharge permit (by filing an Notice of Intent (NOI) with the SWRCB). Projects with less than 1-acre and do not discharge directly to 303(d) waters operate under a general Pollutant Discharge permit for the region, but still must comply with all of the laws pertinent to their project type.
- 2.2.3 State Impaired Waterbodies “303(d)” list** – Section 303(d) of the federal Clean Water Act requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses. California has established such a list of impaired bodies, and

identifies the pollutant or stressor causing impairments, and establishes a schedule for developing a control plan to address the impairment.

This project falls within Hydrologic Subarea 910.10 (Pacific Ocean-Coronado HA). In subarea 910.10, the 2002 303(d) list identifies a 0.38 mile area in and around Tidelands Park (Park just north of the Coronado Bridge as it enters Coronado) as an impaired water body for Bacteria Indicators. This impaired body area lies approximately 6 miles northwest of the project site on the Bay side. Therefore, runoff from this project does not directly discharge to 303(d) listed waters.

Therefore, although extra attention to the 303(d) list impairment (Bacteria Indicators) is important and relevant to this report, we are not required to file a separate Notice of Intent (NOI) with a Storm Water Pollution Prevention Plan (SWPPP) to the State Water Resources Control Board (SWRCB).

### **3. POTENTIAL EFFECTS TO THE WATER QUALITY ENVIRONMENT**

**3.1 Watershed Contribution and Beneficial Uses** – The site and surrounding watershed fall within the Pacific Ocean – Coronado Hydrologic Subarea (Hydrologic Basin Subarea Number 10.10). As Subarea 10.10 contains over 5,500 acres, this project (0.13 acres) represents less than 0.005% of Subarea 10.10. No significant off-site flows impact this site except potentially from the beach where it begins to slope easterly from its crest (and this will be diverted or re-infiltrated by a seawall as is typical of the area), and alley drainage remains in the alley. This basin collects no runoff from other undeveloped or currently rural developed land. Please refer to companion plan C.1 – ‘Permanent BMP Plan’. Runoff from the entire site will flow (after detention, cleansing and de-polluting) into the alley to the east.

**3.1.1 Surface Waters** – The existing beneficial uses for Subarea 10.10 inland *surface* waters include warm freshwater habitat (WARM). Contact water recreation (REC-1) is identified as a potential beneficial use for the 10.10 inland surface waters (municipal water use has been excepted from 10.10). The existing beneficial uses for the Pacific Ocean, which the site’s runoff contacts after a brief trip through the City’s drainage system, includes industrial service supply (IND), navigation (NAV), contact water recreation (REC-1), non-contact water recreation (REC-2), commercial and sport fishing (COMM), preservation of biological habitats of special significance (BIOL), wildlife habitat (WILD), rare, threatened, or endangered species (RARE), marine habitat (MAR), aquaculture (AQUA), spawning, reproduction, and/or early development (SPWN), migration of aquatic organisms (MIGR), and shellfish harvesting (SHELL). There are no additional potential beneficial uses listed. Treatment of runoff from the subject site is for the purposes of reducing pollution impact to

these beneficial water uses, and more specifically, to the Pacific Ocean.

**3.1.2 Groundwater** – There are no existing or proposed uses for Subarea 10.10 *groundwater*. The area is too low-lying and brackish in supply.

The site's water supply will be obtained from the City of Imperial Beach municipality, not from on-site wells.

#### 4. CHARACTERIZATION OF PROJECT RUNOFF (STORMWATER QUALITY)

**4.1 Existing Storm Water Quality at Outfalls** – The 0.13-acre site currently contains very little vegetation and is mostly covered by the encroachment of beach sands. The only *existing* pollutant from site runoff would be sand and sediment particles carried into the street and storm drain system during a significant storm or ocean event.

**4.2 Existing Tributary Drainage Area to Outfall** – Only the area of the site and some of the beach immediately to the west of the site contribute stormwater runoff to the (no particular area of concentration) outfalls of the site to the south and the alley.

**4.3 Identification of Future Pollutants** – Proposed is the construction of a two-unit duplex with separated garages on the first level and living quarters on the upper (split) levels. The roof will be a combination of flat painted deck and sloped clay tile. Hardscape and landscape areas are proposed around the structure.

From the automobile-use areas (uncovered parking and driveway entry), contaminants that may make contact with the open surface include gasoline, oil, coolants, transmission and brake fluids, road tars, rubber, detergents, etc. The roof may carry contaminants such as settled airborne particles, chips, flakes, or particles from decaying roofing materials and wind-carried sediments. Hardscape and landscape runoff may include sediments and chemical or organic fertilizers, and other debris.

In total, as defined by the SUSMP ordinance, the site's future status as an attached residential development dictates that it may produce the following pollutants:

- Sediments
- Nutrients
- Trash and Debris
- Oxygen Demanding Substances
- Oil and Grease
- Bacteria and Viruses
- Pesticides

**4.4 Site Hydrology** – General patterns and flow rate on the site will be maintained. We are required to maintain pre-development discharge rates and therefore some form of storm water detention is required. Runoff within easterly landscaped areas and pedestrian walkways will sheet flow, contact landscaped (vegetated) areas, and then discharge into the alley. Runoff contacting the exterior permeable concrete driveway will permeate into the through the driveway except where rainfall is exceptionally heavy. This area, comprised of the front landscape, pedestrian walkway, and driveway, is defined as area 'A' on the attached Drainage Map 'A'. Runoff contacting the majority of the roof and rear raised outdoor area will be detained for a maximum 100-year-storm, and be discharged at a rate that, when combined with the flows that will sheet flow off the site, will be less than the rate for pre-construction conditions. This area (to be detained), is defined as area 'B' on the attached Drainage Map 'A'. Refer to the Permanent BMP Plan for flow patterns. Refer to 4.5.1 for calculations.

#### **4.5 Water Quality Treatment Volume Based on Water Quality Storm Design**

Where rainwater is unlikely to make contact with major pollutants that are likely to track offsite, the pedestrian walkway areas and easterly landscaped areas, runoff will travel through the groundcover and landscaped areas (or over pedestrian sidewalk with minimal potential for contaminant collection) before discharge into the alley. This method has proven to be an effective method of runoff 'cleansing' so long as vegetated areas are well-maintained and vital. Where rainwater will make contact with the exterior driveway, which is likely to collect incidental petroleum and rubber-based contaminants, it will pass into and through a permeable concrete paving surface, which has been tested and is reliably shown to trap and contain these types of pollutants, while still allowing for passage of rainwater. Where rainwater will make contact with the majority of the roof and rear raised planter area, this runoff will travel through contaminant-filtering catch basins, and thence into the storage system. Where not practical, some of the roof runoff will flow directly into the detention system, and, for a very small portion, flow directly into front landscaped areas. Hydraulic analysis was required to establish the design of the detention system and the adequacy of the filtered inlets.

##### **4.5.1 Hydraulic Analysis**

###### ***4.5.1.1 Method***

The Rational Method was used to determine total flow quantity at time of concentration for a 100-year-storm (and for low pollutant-laden events) for each critical area.

Where noted, the following equation was used to calculate time of concentration:

$$T_c = \left[ \frac{(11.9)(L)^3}{H} \right]^{0.385} \quad (\text{plus 10 min for natural channels})$$

Where noted, the following equation was used to calculate total flow rate Q:

$$Q = C * i * A$$

Where noted, the manning equation, as follows, was used to determine flow quantities and sections of flow:

$$Q_{cap} = A * V, \text{ where} \\ V = (1.49/n) * r^{2/3} * s^{1/2}$$

Where needed, the following equation was used to approximate coefficient of runoff, C, for drainage areas with multiple coefficients:

$$C = [(C_{Area1})(A_{Area1}) + (C_{Area2})(A_{Area2}) + \dots] / [A_{Area1} + A_{Area2} + \dots]$$

Where needed, the Bernoulli equation (along with Q=AV above) was used to determine flow characteristics:

$$p_1/\gamma + Z_1 + V^2/2g = p_2/\gamma + Z_2 + V^2/2g + h_L$$

Where needed, the Orifice Equation was used to determine orifice flow limitations:

$$Q = c * a * \text{SQRT}(2 * g * h)$$

#### **4.5.1.2 Pre-construction Conditions**

Analysis of the 100-year time-of-concentration storm was performed for the site for pre-construction conditions:

$$P_6 = 2.4 \text{ in}$$

$$T_c = 5 \text{ min (use minimum allowed by chart)}$$

$$I = 6.32 \text{ in/hr}$$

$$C = 0.35$$

$$A = 0.113 \text{ acres (the area of the developable portion of the property)}$$

$$Q_{100(\text{pre})} = (0.35)(6.32)(0.113)$$

$$Q_{100(\text{pre})} = 0.25 \text{ cfs}$$

#### 4.5.1.3 Post-Construction Conditions – for Flow Rate Control

Analysis of the 100-year time-of-concentration storm was performed for the site for post-construction conditions. The site was divided into two primary runoff areas – Area A, which will flow directly into the alley, and Area B, which will drain to an on-site detention system designed to limit flows to pre-construction conditions (refer to attached Drainage Map ‘A’ for areas):

##### Area A

$$P_6 = 2.4 \text{ in}$$

$$T_c = 5 \text{ min (use minimum allowed by chart)}$$

$$I = 6.32 \text{ in/hr}$$

$$C = 0.63 \text{ (50\% imp.)}$$

$$A = 0.031 \text{ acres}$$

$$Q_{100}(A) = (0.63)(6.32)(0.031)$$

$$Q_{100}(A) = \mathbf{0.12 \text{ cfs}}$$

Therefore, Area B shall be *limited to*  $0.25 - 0.12 = 0.13 \text{ cfs}$

##### Area B

$$P_6 = 2.4 \text{ in}$$

$$T_c = 5 \text{ min (use minimum allowed by chart)}$$

$$I = 6.32 \text{ in/hr}$$

$$C = 0.87$$

$$A = 0.084 \text{ acres}$$

$$Q_{100}(B) = (0.87)(6.32)(0.084)$$

$$Q_{100}(B) = \mathbf{0.46 \text{ cfs}} \rightarrow \text{limit to discharge of } 0.13 \text{ cfs}$$

##### Detention Pipes Design

(the following design process was iterative, the results of the iterations are shown below):

Propose two separate discharge pipes of 1.00” inside diameter. Because distance to exit is so short, orifice capacity equation should govern over all else:

$$a = 0.00545 \text{ ft}^2$$

$$h = 11.69 - 9.45 = 2.24 \text{ ft elevation head}$$

$$c = 0.62 \text{ (coefficient for square-off/standard cut pipe)}$$

$$Q = (0.62)(0.00545) \cdot \text{SQRT}[(2)(32.2)(2.24)]$$

$$Q = 0.0634 \text{ cfs per pipe}$$

(or for two pipes discharge = 0.127 cfs < 0.13 GOOD, use)

Determine maximum storage capacity required for a 100-year-storm of any duration (see attached spreadsheet in Appendix 'A'):

Maximum demand occurs for a 7 or 8-minute duration 100-year-storm in this area and is 103 ft<sup>3</sup>.

Proposed 12" ADS pipe for storage

Two terminus cleanouts are 24"x24", and provide:

$$(2.24)(2)(2) \times 2 \text{ cleanouts} = 18 \text{ ft}^3, 103 - 18 = 85 \text{ ft}^3$$

$$85 \text{ ft}^3 / 0.785 \text{ ft}^2 = \mathbf{109 \text{ feet of pipe required}} - 133 \text{ ft will be provided.}$$

Emergency overflow is provided at each detention discharge basin in the event of unforeseen clog or greater than 100-year intensity storm.

See plans for final design of system.

#### ***4.5.1.4 Post-Construction Conditions – for Treatment***

##### **Area B**

A determination of the adequacy of the proposed filtered catch basins in the raised planter area, for treatment-based flows and for 100-year-storm overflow rates, is warranted:

Flow for maximal treatment (using 0.2 in/hr method):

$$Q = (0.87)(0.2)(0.084)$$

$$Q = 0.015 \text{ cfs}$$

Each Carson Capture-Flow device promises  
0.05 cfs x 7 inlets = 0.35 cfs > 0.015, OK

Flow for 100-year-storm (bypass):

$$Q = 0.31 \text{ cfs (from 4.5.1.3 above)}$$

Each 8" CB allows for 0.30 cfs bypass capacity  
0.30 cfs x 7 catch basins = 2.10 > 0.31 OK

**4.6 Adjacent Land Use** – The use of this site as a high-density residential lot is consistent with surrounding property uses. There is little, if any, runoff impact from off-site sources. Any minimal offsite flows would have similar characteristics as defined in 4.3 above.

**4.7 Soil Characteristics** – The soil quality in this area tends to be sandy to fine, and landscaped areas may contain imported higher-quality organic matter. The water table rests about 6-7 feet below the surface, which is why reinfiltration alone cannot be used as the sole BMP. No additional adverse impact due to soil quality is anticipated because of the proposed construction.

## **5. MITIGATION MEASURES TO PROTECT WATER QUALITY**

**5.1 Pollution Prevention [Point-Source] BMPs (MEP Based)** – These BMPs (Best Management Practices) are divided into two major categories.

**5.1.1 During-Construction Source-Control BMPs** – The pollution prevention BMPs during construction are chiefly governed by the approved Erosion/Sediment/BMP Plan (ESB) made part of the grading and drainage construction set (sheet 2) for this project. These pollution prevention BMPs include:

**5.1.1.1 Silt fences [SC-1]** – to keep construction sediments on-site

**5.1.1.2 Gravel bags [SC-6]** – to keep construction sediments on-site

**5.1.1.3 Stabilized Construction Entrance [TC-1]**

**5.1.1.4 Tarped soil stockpiles** where necessary [WE-1, WM-3] – for wind and sediment erosion protection.

**5.1.1.5 Concrete, paint, and other hazardous material wash areas [WM-6, WM-8]** – to keep hazardous materials away from storm drain system.

**5.1.1.6 Wood Mulch [SS-8]** – to limit point-source sediment from traveling across the site

**5.1.1.7 Designated material and storage area protection and handling [WM-1, WM-5].**

**5.1.1.8 Proper construction scheduling [SS-1]**

**5.1.1.9 Water Conservation measures [NS-1]**

**5.1.1.10 Paving operations [NS-3]**

**5.1.1.11 Spill Prevention and Control [WM-4]**

Please refer to the plans for more specific information and notation, and to Appendix ‘A’ for details and guidelines.

*Protection for/from ocean activity:*

*In addition to the above BMPs applied to this project, special care and attention shall be made by the contractor to the influence of the actions of the Ocean on the construction site, and vice-versa. Although it has been determined that the entire construction site is*

*above (in elevation) the Ocean's tidal range in this location, it is possible that major storms during the rainy season (when beach erosion is most likely), may cause wave run up to threaten the seawall (or other construction areas) during the construction phase. We recommend that seawall construction occur during the dry season (May 1 through September 30), or, if construction occurs during the rainy season, that a berm consisting of (already present) boulders and sand at least 5 feet high be constructed within the property line but outside the construction area (see attached construction BMP plan – sheet C.2)*

**5.1.2 Post-Construction Source-Control BMPs/Site Design BMPs** - The pollution prevention BMPs considered in the design, and after the completion of construction will include

**5.1.2.1 Proper containment and handling of waste materials** – See Maintenance Schedule – Table 'A'

**5.1.2.2 Proper maintenance of ground cover** – see Maintenance Schedule – Table 'A'

**5.1.2.3 Use of natural herbicides, pesticides, and fertilizers** – Because the groundcover itself is an important proposed BMP, chemical herbicides, pesticides, and fertilizers shall not be used (instead use natural, organic, non-polluting methods) except as a last resort.

**5.1.2.4 Minimize directly-connected impervious areas** – Water from impervious surfaces such as roof runoff is directed to flow through groundcover where practical before entering drainage system.

**5.1.2.5 Diversion surface waters on impervious services not served by the detention system will drain to landscape areas** – where practical.

**5.1.2.6 The exterior driveway will be paved with permeable concrete** – this will trap petroleum and rubber-based pollutants and still allow flow through the driveway.

**5.2 Treatment/Structural BMPs** – These BMPs are divided into two major categories.

**5.2.1 During-Construction Treatment BMPs** – The treatment BMPs during construction are chiefly governed by the approved ESB Plans made part of the grading and drainage plans. These treatment BMPs are included in the list described in 5.1.1.

**5.2.2 Post-Construction Treatment BMPs** – The treatment BMPs after completion of construction will include:

**5.2.2.1 Proper groundcover maintenance** – Groundcover such as sod and other materials are of great benefit to the treatment of sediment or pollutant-laden flows (Refer to maintenance schedule, Table B).

- 5.2.2.2 *Filtered catch basins to catch some roof and raised planter runoff* – this will ensure minimal sediments and contaminants enter the downstream system or clog the small discharge pipes.
- 5.2.2.3 *Use of a detention system* – this ensures that post-construction runoff rates for a 100-year-storm are limited to less than pre-construction rates.

## 6. MAINTENANCE STORMWATER MANAGEMENT PROGRAM

**6.1 Maintenance Responsibility** – The projects owners, and their successors indefinitely, shall be responsible for maintenance and repair of all stormwater pollution prevention measures (refer to Tables A and B for summary of maintenance responsibilities).

**6.1.1 Charter** – The projects owners, being duly responsible for upholding their maintenance responsibilities in accordance with the Clean Water Act and the California Water Code, shall be responsible for maintenance and repair of all stormwater pollution prevention measures (refer to Tables A and B for specific measures). Such responsibility shall run fully with the use of such land, and all successors or assigns to such land shall be made aware of the their responsibilities with regard to stormwater pollution prevention.

**6.1.2 Maintenance Activities per BMPs** – The maintenance activities, as specifically identified in Tables A and B, shall include but not necessarily be limited to maintenance of groundcover and replacement of dead or otherwise ineffectual groundcover, maintenance of irrigation systems for such cover, regular inspections and cleaning the site of debris, maintenance and replacement of the filtered catch basins, maintenance of the controlled-discharge cleanouts and discharge pipes, and proper disposal of waste materials.

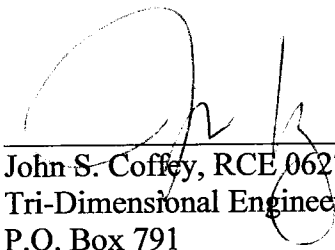
## 7. FISCAL RESOURCES

**7.1 Agreements** – The monetary responsibilities to maintain such system may be enforced upon the present owners of the property (and successors by agreement), by the City of Imperial Beach, in accordance with the regulations set forth in the Clean Water Act and the California Water Code. This written agreement may be *required* by the City of Imperial Beach prior to approval of building permits or building occupancy.

**7.2 Schedule and Cost** – Please see attached Tables A and B for a complete recommended schedule and estimated costs to maintain the post-construction BMP's on-site. Annual maintenance costs are estimated at approximately \$990/yr.

## 8. PROGRAM EVALUATION

**8.1 Preparer of Document** – This document was prepared by

  
\_\_\_\_\_  
John S. Coffey, RCE 062716  
Tri-Dimensional Engineering, Inc.  
P.O. Box 791  
Poway, CA 92074  
(858)748-8333

8-19-06  
Date

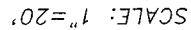


**8.2 Maintenance and Evaluation Contact** – The programs effectiveness and maintenance shall be re-evaluated after a period of three years following completion of construction. The owner shall contact the preparer, Tri-Dimensional Engineering, Inc., or another qualified stormwater BMP evaluator or representative after a period of three years or in the event questions or problems arise from the current uses of the site with regard to stormwater management. A written agreement may be *required* by the City of Imperial Beach prior to the approval of building permits or building occupancy.

## 9. REFERENCES

- City of Imperial Beach Building Permit Set (w/Permanent and Construction BMP Plans), prepared by Signature Architecture.
- City of Imperial Beach Ordinance No. 2003-996 and 2003-1009 (SUSMP and amendments to SUSMP)
- Clean Water Act, United States Government, as prepared in 1972 and amended in 1977.
- California Water Code – Porter Cologne Water Quality Control Act of 1969, State of California, US
- Water Quality Control Plan for the San Diego Basin (9), California Regional Water Quality Control Board – San Diego Region, May 5, 1998.
- California State Water Resources Control Board '303d' list of impaired water bodies, 2002
- County of San Diego Hydrology Manual, 2003
- Caltrans Construction Site Best Management Practices (BMPs) Manual, California Department of Transportation, March, 2003.
- Water Pollution Control Plan (WPCP) for Seacoast Condominiums, 690 Ocean Lane, Imperial Beach, Tri-Dimensional Engineering, September 10, 2003 [neighboring lot to the south].

## **10.1 – Maps**



 **Tri-Dimensional Engineering, Inc.**  
ENGINEERS • PLANNERS • SURVEYORS

P.O. BOX 791 POWAY, CA 92074 (619)748-8333 FAX (619)748-8412

## 10.2 – Tables

**Table A - Recommended BMP Schedule and Cost Estimate**  
(repeat each year in perpetuity)

Date	Procedure Code (from Table D)	Estimated Costs (Per Annum)	
		Labor	Materials/Disposal
1-Oct	W1	\$20	\$10
	G1, G2	\$25	\$15
	F1, F2	\$75	\$25
	D1, D2	\$50	\$10
1-Jan	W1	\$20	\$10
	G1	\$20	\$0
	F1, F2	\$75	\$25
	D1	\$25	\$0
1-Apr	W1, W2	\$40	\$10
	G1, G2	\$25	\$15
	F1, F2, F3	\$150	\$145
	D1, D2	\$50	\$10
As needed (if dis- covered at insp.)	W3	\$25	\$25
	G3	\$45	\$45
		\$645	\$345 Subtotals

<b>** Annual Estimate Total</b>	<b>\$990</b>
---------------------------------	--------------

\*\* Estimate does not include costs that may be incurred for total replacement of major drainage features that may be required as part of the construction materials life cycle (i.e. a system re-build in 50 years or so)

**Table B - BMP Inspection, Maintenance, and Replacement Procedures**

Definitions	(W) Waste/Spill/General	(G) Ground Cover	(F) Filter Inserts (7 on site)	(D) Detention System
code	W1	G1	F1	D1
(1) Inspection	Inspect site, especially motor vehicle areas, for spills of petroleum products, solvents, and other hazardous wastes. Visually inspect standard catch basins and clear debris. Consult Caltrans guides as needed.	Inspect site for signs of failure of ground cover to thrive, washing out or erosion below material, inspect irrigation system for signs of over or under watering	Broom clean around the inlet and remove debris from the grate, remove grate and collect debris from the top of filter and the grate ledge. Inspect the visible areas of the filter for damage and serviceability. Replace grate and properly dispose of debris. Clear all debris from c.b. rim	Lift covers on cleanout boxes, check for and remove any debris or sediment.  Lift covers on upstream cleanouts, check for and remove any debris.
code	W2	G2	F2	D2
(2) Maintenance	Perform 'Inspection' duties AND lift grates from catch basins and remove & clean debris from basins. See Caltrans Guides if hazardous material spills have occurred and follow procedures outlined therein.	If needed, restore slope to previous condition, determine nature of failure, replace or repair faulty irrigation system components.	Perform all 'Inspection' duties above, AND remove the filter assembly. Brush clean the assembly structure and inspect it. Brush clean the filter medium containers. Mix up the filter medium and inspect it for remaining useful life. Replace the assembly and grate.	Perform all 'Inspection' duties above AND hose and/or pipe clean 1.25" outlet pipes.  Hose-test system from upstream filtered inlet
code	W3	G3	F3	
(3) Replacement	Replace catch basin grates if damaged	Re-plant material if existing material is unrecoverable. Cover slopes if during rainy season with slope protection medium while plant material is maturing.	Perform all 'Inspection' and Service' duties above AND replace all filters. Dispose of material in accordance with local, state, and federal regulations.	

## **10.3 – Appendices**

**Appendix 'A' – Detention Basin Chart  
(plus charts, graphs, etc, used in hydraulic design)**

Storm Duration (min)	C	A	Discharge Vol (.127 cfs) (cu ft)	100-year-storm		
				Inflow (cu ft)	Total Water (cu. ft)	In Basin
1	0.87	0.084	8	17.86	78	71
2	0.87	0.084	15	11.42	100	85
3	0.87	0.084	23	8.79	116	93
4	0.87	0.084	30	7.30	128	98
5	0.87	0.084	38	6.32	139	101
6	0.87	0.084	46	5.62	148	102
7	0.87	0.084	53	5.09	156	103
8	0.87	0.084	61	4.67	164	103
9	0.87	0.084	69	4.33	171	102
10	0.87	0.084	76	4.04	177	101
11	0.87	0.084	84	3.80	183	100
12	0.87	0.084	91	3.60	189	98
13	0.87	0.084	99	3.41	195	96
14	0.87	0.084	107	3.25	200	93
15	0.87	0.084	114	3.11	205	90
16	0.87	0.084	122	2.99	210	88
17	0.87	0.084	130	2.87	214	85
18	0.87	0.084	137	2.77	218	81
19	0.87	0.084	145	2.67	223	78
20	0.87	0.084	152	2.59	227	74
25	0.87	0.084	191	2.24	245	55
30	0.87	0.084	229	1.99	262	33
35	0.87	0.084	267	1.80	277	10
40	0.87	0.084	305	1.65	290	-15
45	0.87	0.084	343	1.53	302	-40
50	0.87	0.084	381	1.43	314	-67
55	0.87	0.084	419	1.35	325	-94
60	0.87	0.084	457	1.27	335	-122

← MAXIMUM

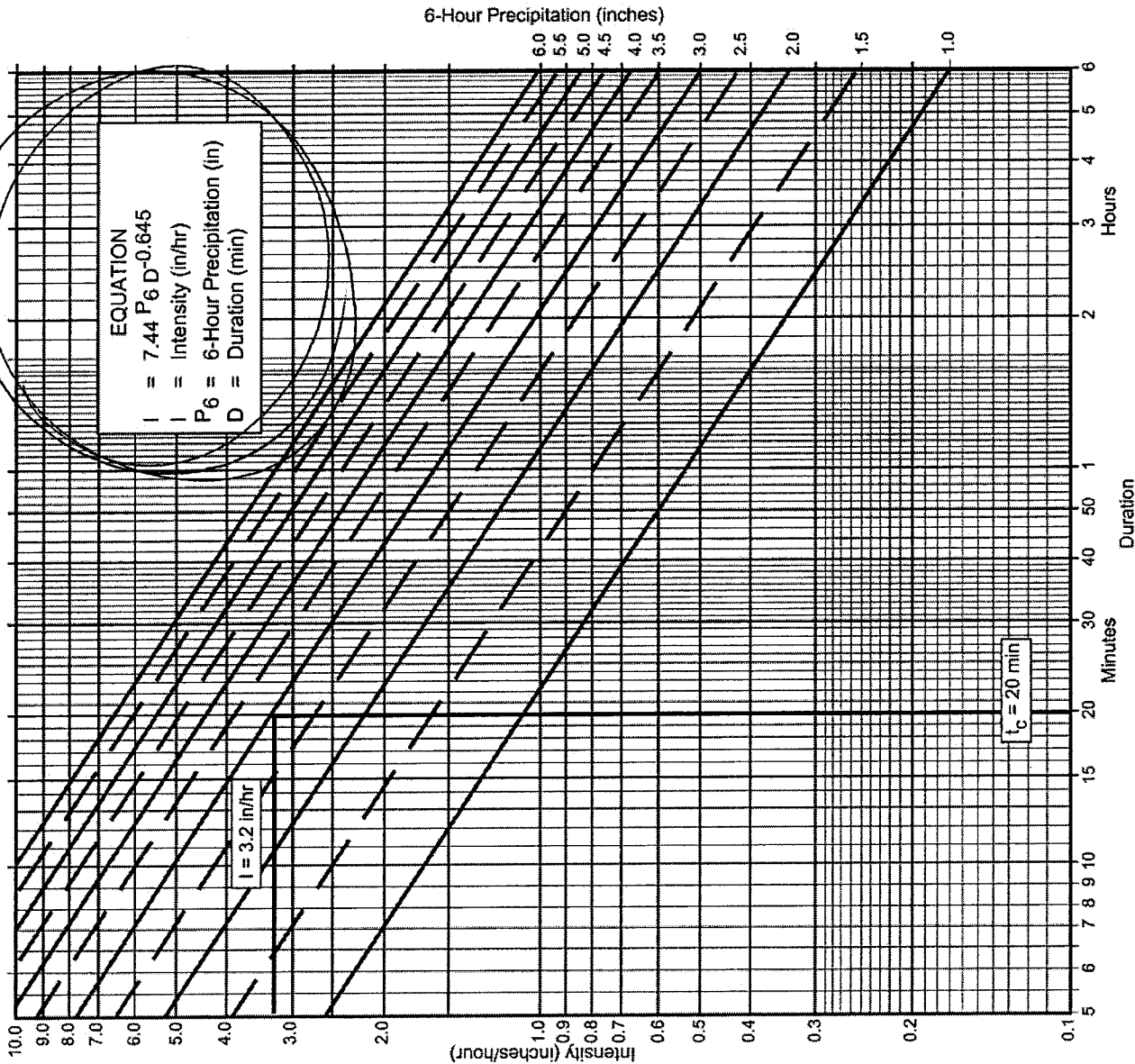
Table 3-1  
RUNOFF COEFFICIENTS FOR URBAN AREAS

Land Use		Runoff Coefficient "C"			
NRCS Elements	County Elements	% IMPER.	Soil Type		
			A	B	C
Undisturbed Natural Terrain	Permanent Open Space	0*	0.20	0.25	0.30
Low	Residential, 1.0 DU/A or less	10	0.27	0.32	0.36
Low	Residential, 2.0 DU/A or less	20	0.34	0.38	0.42
Low	Residential, 2.9 DU/A or less	25	0.38	0.41	0.45
Medium Density Residential	Residential, 4.3 DU/A or less	30	0.41	0.45	0.48
Medium Density Residential	Residential, 7.3 DU/A or less	40	0.48	0.51	0.54
Medium Density Residential	Residential, 10.9 DU/A or less	45	0.52	0.54	0.57
Medium Density Residential	Residential, 14.5 DU/A or less	50	0.55	0.58	0.60
High Density Residential	Residential, 24.0 DU/A or less	65	0.66	0.67	0.69
High Density Residential	Residential, 43.0 DU/A or less	80	0.76	0.77	0.78
Commercial/Industrial	Neighborhood Commercial	80	0.76	0.77	0.78
Commercial/Industrial	General Commercial	85	0.80	0.80	0.81
Commercial/Industrial	Office Professional/Commercial	90	0.83	0.84	0.84
Commercial/Industrial	Limited Industrial	90	0.83	0.84	0.84
Commercial/Industrial	General Industrial	95	0.95	0.95	0.95

\*The values associated with 0% impervious may be used for direct calculation of the runoff coefficient as described in Section 3.1.2 (representing the pervious runoff coefficient, Cp, for the soil type), or for areas that will remain undisturbed in perpetuity. Justification must be given that the area will remain natural forever (e.g., the area is located in Cleveland National Forest).

DU/A = dwelling units per acre

NRCS = National Resources Conservation Service



### Directions for Application:

- (1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).
- (2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicable to Desert).
- (3) Plot 6 hr precipitation on the right side of the chart.
- (4) Draw a line through the point parallel to the plotted lines.
- (5) This line is the intensity-duration curve for the location being analyzed.

### Application Form:

- (a) Selected frequency 50 year
- (b)  $P_6 = 3$  in.,  $P_{24} = 5.5$ ,  $\frac{P_6}{P_{24}} = 54.5 \%$
- (c) Adjusted  $P_6^{(2)} = 3$  in.
- (d)  $t_c = 20$  min.
- (e)  $I = 3.2$  in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration	1	1	1	1	1	1	1	1	1	1	1
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Example

FIGURE

3-2

# County of San Diego Hydrology Manual



## Rainfall Isoplethals

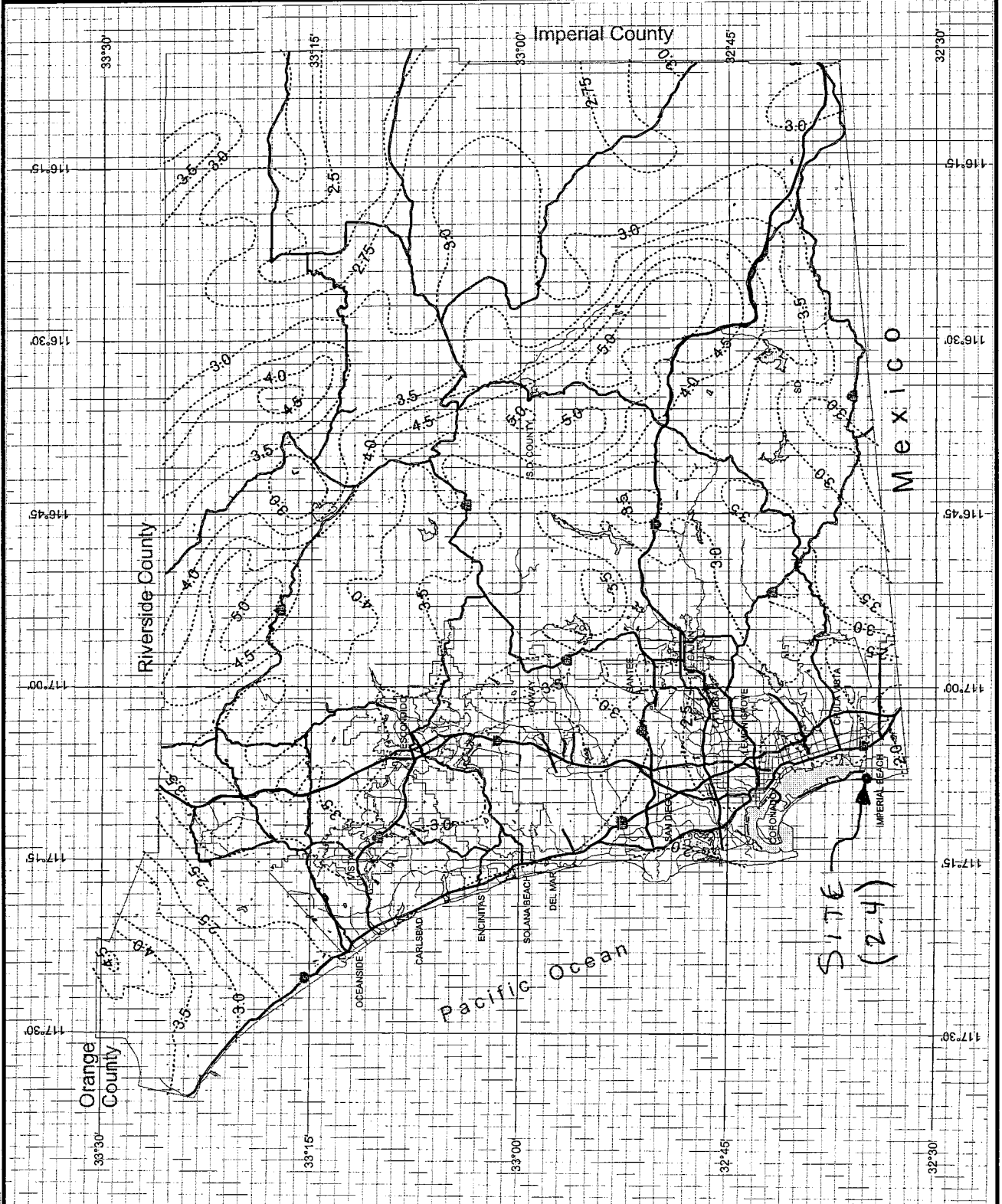
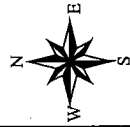
100 Year Rainfall Event - 6 Hours

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# County of San Diego Hydrology Manual



## Rainfall Isoplethals

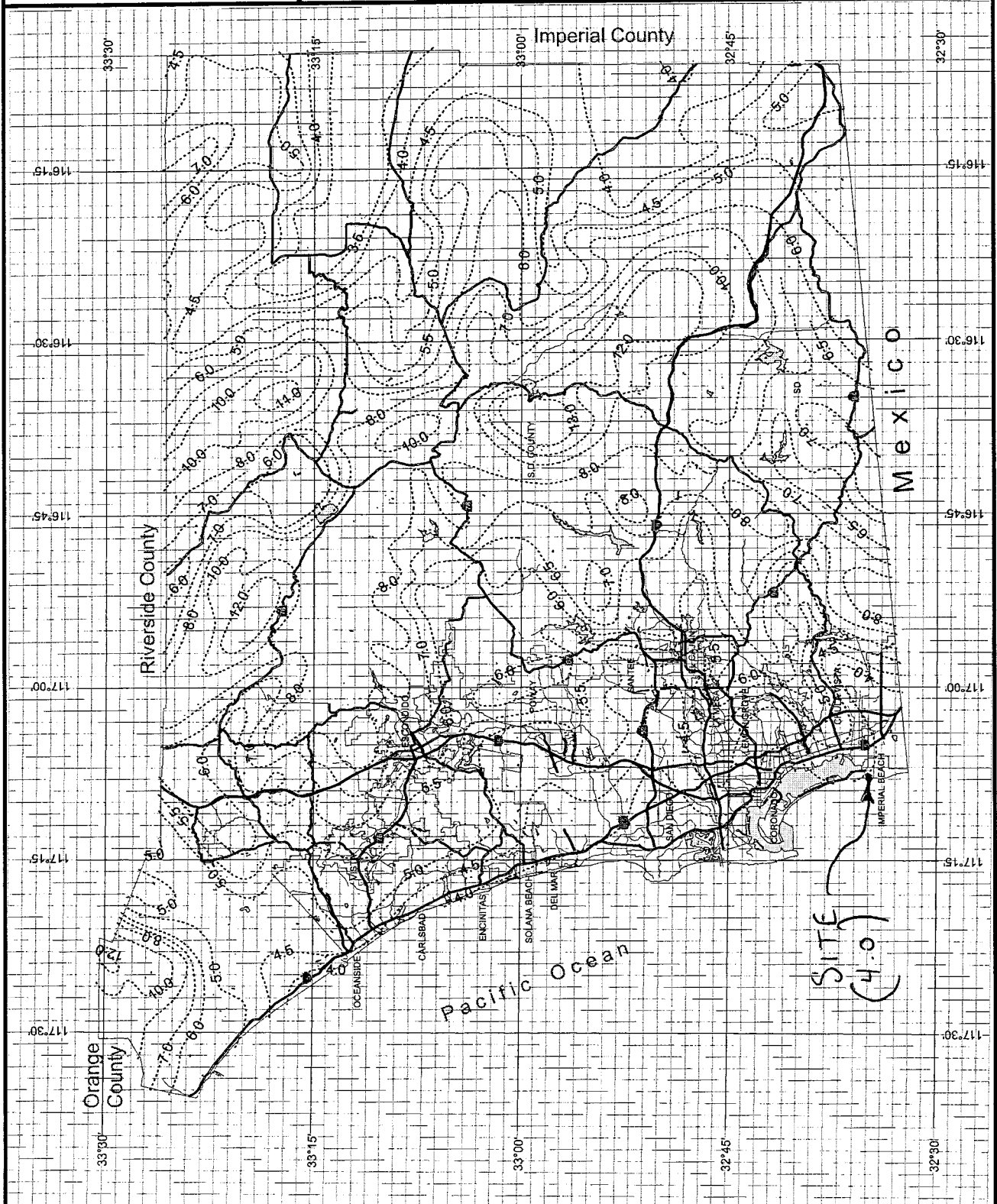
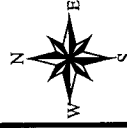
100 Year Rainfall Event - 24 Hours

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**Appendix 'B' – Caltrans Guides  
(notes, details for construction site BMPs)**